A NOVEL OF THE FUTURE COMPLETE IN THIS ISSUE!

STARTLING STORIES

FALL ISSUE

15¢

A THRILLING PUBLICATION

Pirates OF THE TIME TRAIL

An Astounding Complete Novel

By ROSS ROCKLYNNE

THE SPACE DWELLERS

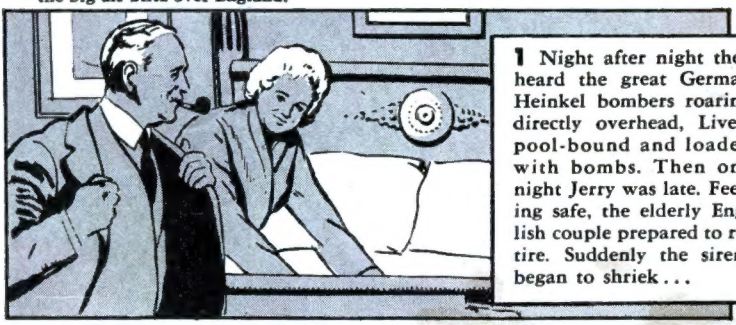
A Hall of Fame Classic

By RAYMOND Z. GALLUN

BUY WAR BONDS AND STAMPS FOR VICTORY!

SECONDS LATER THE BIG ONE CAME!

A true experience of Mr. and Mrs. James Sproston, of Cheshire, during the big air blitz over England.



1 Night after night they heard the great German Heinkel bombers roaring directly overhead, Liverpool-bound and loaded with bombs. Then one night Jerry was late. Feeling safe, the elderly English couple prepared to retire. Suddenly the sirens began to shriek . . .

2 Came the rumble of jettisoned bombs. Sproston grabbed up his flashlight. He and his wife hurried downstairs to black out the windows. The next moment an explosion shook the house. Seconds later the big one came . . .

3 . . . Half demolished the house and threw its stunned occupants violently to the floor... Some time after, two passing air wardens saw a light shining out of the wreckage. It was the beam from Sproston's faithful flashlight—a beam that directed the rescue of two more victims of the Luftwaffe's ruthlessness.

SPARE YOUR FLASHLIGHT BATTERIES!

For your own emergency protection (witness the Sproston's experience) as well as to conserve critical war materials, use your flashlight normally as little as possible. Make a habit of flashing it *intermittently*, not *continuously*. Also:

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Address .....

City..... State.....

Social Security Number..... Army Draft Number.....

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STARTLING STORIES

Vol. 10, No. 1 | CONTENTS | Fall, 1943

A Complete Book-Length Scientifiction Novel

PIRATES OF THE TIME TRAIL

By ROSS ROCKLYNNE

After a Desperate Fight Against Japs in the Air, Steve Killiard Finds Himself in a Mysterious World of Phantoms, the World of Might-Have-Been Where Adventure and Romance Beckon! 15

Unusual Short Stories

THE MONKEY AND THE TYPEWRITER ..... William Morrison 97
Nobody Could Foresee the Amazing Results Bingley Was Going to Get

THE SPACE DWELLERS ..... Raymond Z. Gallun 106
A Hall of Fame Story Reprinted by Popular Demand

SECRET WEAPON ..... Joseph Farrell 114
A Clever Commander Finds One Way to Outwit a Space Criminal

Special Features

THE ETHER VIBRATES ..... Announcements and Letters 8
THRILLS IN SCIENCE ..... Oscar J. Friend 92
A WAR BOND MESSAGE ..... John Dos Passos 105
THIS STARTLING WAR ..... News from the Science Front 113
MEET THE AUTHOR ..... A Department 125
REVIEW OF FAN PUBLICATIONS ..... Sergeant Saturn 127

Cover Painting by Earle K. Bergey—Illustrating "Pirates of the Time Trail"

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Companion magazines: Thrilling Wonder Stories, Captain Future, Popular Western, Thrilling Mystery, Thrilling Western, Thrilling Detective, Thrilling Adventures, Thrilling Love, The Phantom Detective, RAF Aces, Sky Fighters, Popular Detective, Thrilling Ranch Stories, Thrilling Sports, Popular Sports Magazine, Range Riders Western, Texas Rangers, Everyday Astrology, G-Men Detective, Detective Novels Magazine, Black Book Detective, Popular Love, Masked Rider Western, Rio Kid Western, Air War, The Masked Detective, Exciting Detective, Exciting Western, West, Exciting Love, Army Navy Flying Stories, Rodeo Romances, and Exciting Mystery.

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There's probably an opportunity right in your neighborhood to make money in spare time fixing Radios. I'll give you the training that has started hundreds of N.R.I. students making $5, $10 a week extra within a few months after enrolling. The N.R.I. Course isn't something just prepared to take advantage of the present market for technical books and courses. It has been tried, tested, developed, perfected during the 28 years we have been teaching Radio.

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See how easy it is!

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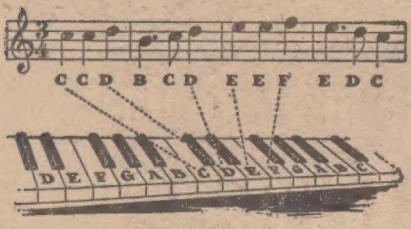
Look at the diagram. The first note on the music is "C." Follow the dotted line to the keyboard and locate "C" on the piano. Find the other notes the same way. Now strike the notes as indicated and you'll be playing the melody of that famous patriotic hymn, "America." Easy as A-B-C, isn't it?

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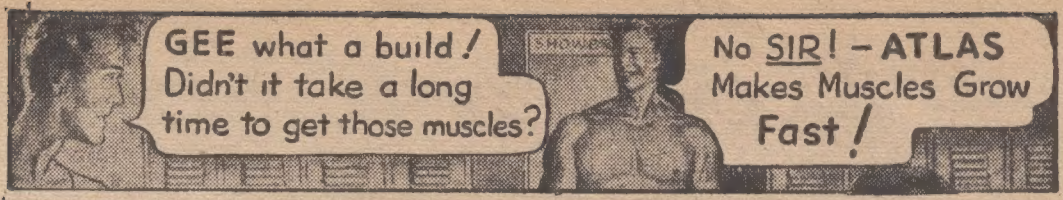

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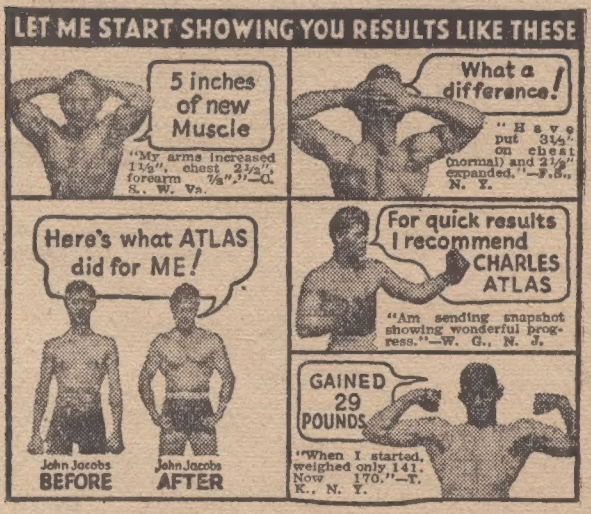
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I can broaden your shoulders, strengthen your back, develop your whole muscular system INSIDE and OUTSIDE! I can add inches to your chest, give you a vise-like grip, make those legs of yours lithe and powerful. I can shoot new strength into your old backbone, exercise those inner organs, help you cram your body so full of pep, vigor and red-blooded vitality that you won't feel there's even "standing room" left for weakness and that lazy feeling! Before I get through with you I'll have your whole frame "measured" to a nice, new, beautiful suit of muscle!

What's My Secret?

"Dynamic Tension!" That's the ticket! The identical natural method that I myself developed to change my body from the scrawny, skinny-chested weakling I was at 17 to my present super-man physique! Thousands of other fellows are becoming marvelous physical specimens—my way. I give you no gadgets or contraptions to fool with. When you have learned to develop your strength through *"Dynamic Tension,"* you can laugh at artificial muscle-makers. You simply utilize the DORMANT muscle-power in your own God-given body—watch it increase and multiply double-quick into real solid LIVE MUSCLE.

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City ..... State.....

☐ *Check here if under 16 for Booklet A.*

A Department Where Readers, Writers and Sergeant Saturn Get Together

THE first thing we'll tear apart this voyage, of course, will be the manifest of next issue's cargo. Let's begin by sharpening our collective teeth on the full-length novel.

Our old friend, Malcolm Jameson, returns to STARTLING STORIES with as powerful a drama of a scientific crisis as we have loaded into the hold of this ship in a long time. THE GIANT ATOM, Jameson's latest, is the story of a laboratory experiment that gets completely out of control.

From the very moment of the inception of THE GIANT ATOM until the hero, Steve Bennion, fighting against all sorts of odds, solves the problem of its disposal, this novel of a world in peril will grip your attention and hold you in its spell with the strength of twenty gravities at full acceleration.

Steve, an electronic engineer extraordinary, finds himself pitted against powerful financial interests who pirate every worthwhile invention or discovery in the scientific and industrial fields. Supported by his secretary and fiancée, Kitty Pennell, he does his utmost to avoid the greedy traps of the General Atomic Corporation. To no avail. The huge trust ruins him and then hires him by trickery to put his brilliant mind at work as one of its many able employees.

From this point on, as soon as he realizes what has happened, Steve Bennion fights grimly against a well-nigh inescapable fate. Before he knows it he has the big corporation and most of the people of the world against him.

On top of this cruel irony he has the terrible problem of atomic fire to conquer, a fire that he himself has not started and which no other living scientist proves capable of handling! There are amazing thrills in THE GIANT ATOM, in the next issue!

Hall of Fame Classic

The Hall of Fame Classic which comes to you in the next issue is a notable yarn, and it is illustrated by Paul. THE LAST WOMAN, by Thomas D. Gardner, is a story of a day twenty thousand years in the future, one of the best of its type that we have ever selected for Hall of Fame honors. You are going to enjoy it immensely.

And, of course, there will be other short stories, new THRILLS IN SCIENCE and other interesting features. And—don't forget this department where all you little ogres can raise your voices in choral cacophony. The Ether Vibrates! The old Sarge doesn't wonder.

And now, if you will gather closely around the chart table so as not to block the main corridor, we will man the stirrup pump and open this month's mail bag for our usual fire drill.

THE first communique is from a pee-lot who thinks it is still Spring.

At least, he couches his tender message in space doggerel.

POETIC THRENODY

By Joe Kennedy

Dear Sarge:

Longfellow, Whittier, Wordsworth, Key.
What have the poets got on me?
'Neath an April sky and an August moon
I'll comment on dear old *Startling* (June).

To Wit:

As for the cover, t'was far worse than germs;
I never did care much for overgrown worms.
I fear that the artwork has taken a slip,
Except for V. Finlay, who turned out a pip.

Yes, only the drawings by Finlay and Paul
Came anywhere near being decent at all.
But *"Wings of Icarus,"* a novel by Cummings
Soon filled up the air with immense joyous hummings.

Three cheers, as this story took place on Neptune,
Instead of Mars, Venus, the Earth or the Moon.
Who said that Ray Cummings was writing in ruts?
He turned out a novel that sure was the nuts.

"Son of His Father," by Frank Belknap Long
Came uncomfortably close to its getting the gong.
However, a Thorne Lee short story, *"Ghost Planet"*
Is truly a credit to you guys, who ran it.

And Raymond Z. Gallun this month was delicious;
His *"Planet X"* story exceeded my wishes.
The Hall-of-Fame classic known as *"The Ideal"*
Was written by Weinbaum and filled me with zeal.

Go out and compare it with *"S-T-F Giants"*
And notice how scarce is our present-day "science."
Most of the features sure made me quite mad,
Except the Old Sergeant, which wasn't so bad.

Didn't you say all your mags have two clips?
Few of 'em do, and don't blame it on slips.
I bet that trimmed edges would go over swell;
I'm strong on that subject and don't mean in smell.

Here's a nice thought (if you want to look in it)—
Longfellow is now turning over each minute.
—*84 Baker Avenue, Dover, N. J.*

Well, Kiwi Joe, you live on the right street. You have cooked this one to a crisp, and the least the old Sarge says about it the better. If you're not ashamed of it, neither am I. Perhaps we are both going from verse to verse, and I don't mean wiener.

We will now pause briefly for a tilt (of the

(Continued on page 12)

I C S Success

• "I see success," says the *trained man*, looking ahead to Victory and the mighty era of industrial expansion and development arriving with it. Does *YOUR* eye see success ahead? Act now to obtain essential *training* and it will!

• There will still be ruts in tomorrow's world of industrial marvels — and the untrained will occupy them. For the *trained man*, however, there will be more and more opportunities.

• *Training* is the road to opportunity, better jobs, bigger pay, greater responsibility. *Spare-time I. C. S.* study at low cost is one of the roads to training.

• The man with the discerning eye studies as he looks ahead. He is mastering an I. C. S. Course *today* in preparation for tomorrow. Be one of the far-sighted! Mail the coupon *right now*. It may be the most important act of your life!

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- ☐ Radio Operating
- ☐ Radio Servicing
- ☐ R. R. Section Foreman
- ☐ R. R. Signalman ☐ Refrigeration
- ☐ Sanitary Engineering
- ☐ Sheet Metal Work
- ☐ Ship Drafting
- ☐ Shipfitting ☐ Shop Practice
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- ☐ Steam Fitting
- ☐ Structural Drafting
- ☐ Structural Engineering
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- ☐ Toolmaking ☐ Tool Design
- ☐ Welding, Gas and Electric
- ☐ Woolen Manufacturing

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- ☐ Managing Men at Work
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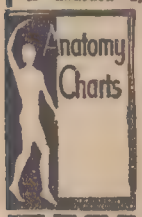

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THE ETHER VIBRATES

(Continued from page 8)

Xeno jug) with a capering kiwi from the state of suspended animation.

HAPPY DISPATCH

By W. S. Burgeson

Dear Animated Tank of Xeno: Finding myself in a charitable mood, mine illustrious non-com, I have decided to write you a letter. I suppose you are enjoying your regular treatments for snakebite? I refer to your indulgence in the consumption of Xeno, of course. I would like to add plaster of paris to the ingredients some time.

Hara Kiri, 'tis said, means "happy dispatch." Well, now that you know what it means . . .

Say! Isn't Frog-Eyes the guy that used to play the violin at the "Spaceman's Rest"? Sounded like Chopin in long pants. Why doesn't Hitler go to Hollywood? They'd be glad to star him in an underground play with a six-by-two plot!

No stinkweed this time, Sarge, only roses. But where do you get your covers? Sometimes it seems that once every three weeks you head for the nearest Five & Dime Store to pick out a cover painting.

But now for the June S.S.

The Cover: I will pass this up, as my heart is not so strong as it used to be. Bergey can do much, much better.

"Wings Of Icarus": Cummings really did himself proud with this one. A swell yarn. Three roses!

"The Ideal": Very good! My favorite story of all of the late Mr. Weinbaum's works is "The New Adam." But that's too long for your Hall of Fame. Three Roses!

"Son of His Father": !!!XXX!!!%%!$!!

The next time I read a tale like that I'm going to nail the soles of my shoes to the ceiling and hang that way. Maybe then I can get something out of it. As it was, it left me with Apoplexy! ¼ Rose.

"Hell Stuff for Planet X": Whoops! I must need glasses; or is that really a Finlay pic gracing this yarn? Well, haul me away to the Happy House, it is! Well, now, it was right nice of you and the boys to give up your lunch money for a month so that we could have Finlay. I sincerely appreciate that! Yes, indeed!

The story? Two Roses!

"Ghost Planet": One Rose!

Now, darn it! Who in Hades started this "trimmed edges" business? Same aren't worth the powder to blow 'em to Germany! Trimmed edges, I've heard, are expensive. With them, the price of the "Big Three" would have to be raised. Would we be paying for more stories? No! We would be paying for trimmed edges. I would gladly pay much more if I could get more stories, more articles, more artwork, etc., but I will *not* pay more for a senseless thing like trimmed edges! If you have to raise the price because of added publication costs due to the war, O.K., but *no trimmed edges!*

Articles this ish were good. The Ether Vibrates was good, but would have been better had one of my letters graced it. (Heh, heh! I but jest, of course!)

Well, my ringed-planet protégé, I see the white-clad boys with the butterfly nets have come to take me home. So I'll leave now.

Sneak thru the keyhole some night and I'll tell you all about my operation. Tell Frog-Eyes that I hope he gets his head caught in the neck of an Xeno jug.

"With Eternal Affection,"
2300 16th Ave. So., Minneapolis, Minn.

Frog-eyes, Pee-lot Burgeson, has a tubular tongue which he inserts in my Xeno jug when

Keep Old Glory Flying!

BUY WAR BONDS AND STAMPS

Regularly!

I am not looking and siphons up a quart or two of the magical elixir. He can't get his head in the bottle-neck because of his wart-ears, but once he did suck up a handful of mothballs from the wrong jug and got his tongue caught. If you are interested, drop me a private note of inquiry, and I'll tell you how I freed him. Next case, please.

MILK TOAST

By Monroe Kuttner

Dear Sarge: As I was walking home from school one day, I dropped into a candy store and scanned the pile of Mags in the corner, when suddenly my eyes landed on the June issue of STARTLING STORIES. I asked myself, could that be a science-fiction Mag? Then I saw the caption on the cover. "Scientifiction at its best." Hurrah, it was. Immediately I grabbed it, dropped the 15c in the man's hand and rushed home.

By now, you've probably caught on to the fact that I said school in the first sentence. Well, I might as well get it out, I'm only 13 years old. All right, all right, don't get mad, I've got to live up to my nick-name, don't I? What nick-name, you say? Well, my classmates call me the Mad Scientist. Since my ambition is to build a Rocket Ship and go to Mars, don't you think it should be? Well, maybe you don't, but my un-superscience-minded classmates do. So, in order to get ideas, and for enjoyment, I read science-fiction.

Now to get on with STARTLING STORIES. When I looked through the contents I thought, hmm, only one author I've heard of—Cummings, but he's good. When I finished, I thought, well, this book certainly lives up to the caption, Scientifiction at its best. The book relies on the quality of the story, and not only the author's name.

Here's my rating for the June issue. Since I'm not old enough to drink Xeno, whatever that is, I'll stick to good old 20th-century milk.

"Ghost Planet"—5 glasses of milk. One of the best short stories I've read.

"Wings of Icarus"—4 glasses of milk.

"Son of His Father"—3 glasses of milk. Good story with surprise ending.

"Hell-Stuff for Planet X"—2 glasses of milk.

"The Ideal"—1 glass of milk. (Most of The Ideal is a little above my head.)

As for the cover and interior pictures—can't your artists draw anything besides people, or people with monsters in the background, or monsters with people in the background? Your special features are all good—especially "The Rocket's Red Glare" and "The Ether Vibrates."

—41-16 51st St., Woodside, N. Y.

Kiwi, you ain't foolin' about that rocket business. If you keep up with SCIENTI-FACTS in THRILLING WONDER STORIES, you'll find interesting items every now and then on the progress and development of this type of flight. The day is fast approaching, and you certainly should live to see it, when rocket flight is as commonplace as air transportation is today. And there's nothing wrong with the milk diet, either; take that from the old Sarge in spite of all he says about Xeno.

FIFTH IN LINE

By Bob Parker

Attention, Sarge Saturn: Please excuse the pencil, Sarge, but I'm home this week with the measles and can't get at a typewriter.

Let's get on with the topic of discussion, the June issue of S.S.: The club of which I am president, "E.O.B.S.F." or "Exponents of Better Science Fiction," held a meeting last week, with the following results. STARTLING STORIES was picked the fifth best mag of this month from twelve mags judged. Your features ranked third. You improved over two months ago, when you were eighth. Here are some suggestions that were given for improving S.S.: Different cover artist. Better interior illustrations. Get novels that are longer, preferably by Bond, Hamilton, Wilcox, and David O'Brien. Have a con-

(Continued on page 118)

WHY GOD PERMITS WAR!

Why does God permit war? Why does He permit cruelty, injustice, pain, starvation, sickness and death?

Thirty years ago, in Forbidden Tibet, behind the highest mountains in the world, a young Englishman named Edwin J. Dingle found the answers to these questions. A great mystic opened his eyes. A great change came over him. He realized the strange Power that Knowledge gives.

That Power, he says, can transform the life of anyone. Questions, whatever they are, can be answered. The problems of health, death, poverty and wrong, can be solved.

In his own case, he was brought back to splendid health. He acquired wealth, too, as well as world-wide professional recognition. Thirty years ago, he was sick as a man could be and live. Once his coffin was bought. Years of almost continuous tropical fevers, broken bones, near blindness, privation and danger had made a human wreck of him, physically and mentally.

He was about to be sent back to England to die, when a strange message came — "They are waiting for you in Tibet." He wants to tell the whole world what he learned there, under the guidance of the greatest mystic he ever encountered during his twenty-one years in the Far East. He wants everyone to experience the greater health and the Power, which there came to him.

Within ten years, he was able to retire to this country with a fortune. He had been honored by fellowships in the World's leading Geographical Societies, for his work as a geographer. And today, 30 years later, he is still so athletic, capable of so much work, so young in appearance, it is hard to believe he has lived so long.

As a first step in their progress toward the Power that Knowledge gives, Mr. Dingle wants to send the readers of this notice a 9,000-word treatise. It is free. For your free copy, send your name and address to the Institute of Mentalphysics, 213 South Hobart Blvd., Dept. F-336, Los Angeles, Calif. Write promptly.

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The ROSICRUCIANS
(AMORC)
SAN JOSE CALIFORNIA

As Killiard was fighting beside Lobard, the pirate's torso vanished (CHAP. X)

PIRATES OF THE TIME TRAIL

By ROSS ROCKLYNNE

After a Desperate Fight Against Japs in the Air, Steve Killiard Finds Himself in a Mysterious World of Phantoms, the World of Might-Have-Been Where Romance and Adventure Beckon!

CHAPTER I

Bomber Squadron

FROM this height the sea was a great gray carpet laid across the face of the world, and the wakes churned up by the vessels of two fleets locked in death battle were but streaks of white lint on the carpet.

Somewhere to the north was Japan. Somewhere to the south, Australia. Above were the depthless reaches of a blue, unmarred sky. And up in that sky, flying with apathetic precision, Captain Steve Killiard occupied a thundering, twin-motored world of his own.

To Killiard the thunder of those giant motors was felt rather than heard. It washed through a man's body like an anesthetic—dulling emotions, dulling personality, fantastically seeming to mold the body to the plane until hands and arms and legs and mind were but extensions of the instrument panel. One forgot, after a time, whether hands and arms and legs and mind controlled the bomber as it rolled on its dead level

course, or whether they reacted merely to the desires of the bomber. It did not matter. The bomber, with its crew of five, was one entity, with one fixed purpose—to sink and destroy.

That bomber was one entity among many. It was one of six Mitchell's flying in formation, approaching the naval operation in which two enemy fleets were fighting to a grim conclusion, in which Japanese Zeros and Mitsubishis fluttered like moths over the carpet-like sea, attacked by and attacking Allied Corsairs and Airacobras.

"Objective sighted," came the cool, tinny drawl of the flight commander. "Act as individual units. Attack at will."

The voice in Killiard's headphones cut off. He raised his eyes from the instrument panel, eased the left rudder. And the Mitchell, breaking smoothly from the formation, gave no evidence within itself that it had changed course, save that the ocean seemed to move to the right in a slow, sweeping arc. The toy ships on the horizon, rocking with each salvo of red, bursting fire, hardly changed position with reference to the banking ship, for they were still some miles ahead.

The enemy fleet was thinned out in a long, straggling line.

Seven enemy destroyers and heavy battlewagons were either sunk or limping and out of the battle. One battleship was going down by the stern.

DIPPING and diving, sinuously wriggling out of tight spots like the snakes after which they were named, a flight of Airacobras were in chattering combat with a swarm of Zeros and Mitsubishis. Captain Steve Killiard watched this secondary battle out of the corner of his eyes.

His own fighter planes, three in number, huddled close to their parent, wary and ready to defend.

He spoke through the intercommunication phone, addressing himself to his bombardier, who sat in his plexiglass enclosed cubby in the nose of the ship, in front of and below Killiard—sat there on his "bicycle seat," coolly waiting for Killiard to give him command of the ship.

"We'll tackle that baby off to the left," Killiard said briefly. "Carrier." His firm lips, set over a cleanly-shaven, cleft chin, lifted in a fighting smile. "All yours, Jim."

"Okay, Steve," the bombardier cracked out. "Level out at two thousand."

"Coming down the mountain," Steve Killiard muttered. He caught his co-pilot's tensed glance. That individual raised the thumb and forefinger of his right hand, formed an "o" of approval. He grinned broadly. He pointed toward the triumphant flight of Airacobras. Three enemy planes were rolling down out of the sky; one, a Zero, with its wings broken off cleanly; the other two, Mitsubishis, trailing ominous clouds of tar-black smoke.

Steve Killiard nodded, his eyes, glinting, and turned his attention back to the nearing aircraft carrier, still but a toy on the unruffled ocean. Its decks were empty of all but perhaps two dozen pursuit ships. As Killiard watched, half the ships, one after another, left the broad deck of the carrier, dipped into space. They disappeared from sight under the Mitchell.

Three destroyers near the carrier trailed s-shaped wakes. One other was making furious headway around the Jap carrier's stern, striving to lay down a smoke-screen.

Steve Killiard leveled out. He held his forward course inflexibly, until the bombardier commanded:

"Right—three degrees right—set!"

Killiard notched the wheel over. The muscles of his long body tensed until it seemed likely they would break out the seams of his regulation blouse. The carrier was growing to an immense size, a long low raft of a ship, aswarm with frantically running Japs. Another flight of fighters left its decks.

Killiard's three escorting planes were gone below, to combat the enemy fighters.

The three protecting destroyers now blossomed with their fanning flak. Tiny

white clouds of smoke appeared to right and left of the bomber. The bomber jerked and wobbled as if a giant had touched her briefly. "Hold her," snapped the bombardier, his voice deadly cool.

Killiard held her, quieting the see-sawing wings.

"Hold her there!"

Killiard sat still, experiencing one long drawn-out moment when the bomber seemed to hang motionless two-thousand feet above the smoke that wisped from the carrier's funnels. He sat with nerves that were tight and tingling with the variety of impressions that flowed in from the outside world. Sunlight and blue sky and tortured battlegrounds and unruffled oceans and the depths beneath the oceans: they crawled with man-made monsters. Firecrackers, giant firecrackers, roared and rumbled.

"Up! Take 'er away! Scram!"

The bombardier's joyful yell sounded in Killiard's ears. Time now jumped into gear again, and he found himself once more in a real ship, moving at two hundred miles an hour above the Jap carrier. His hands reacted automatically, touched at his elevator controls. The bomber roared up into the blue sky at a laboring angle—and suddenly was followed by a voluminous, rolling explosion that caught it and lifted it still higher. Smoke, white and billowing, fluffed up past the windows, then magically cleared away as the plane ascended beyond the effects of whatever frightful event had occurred below.

KILLIARD climbed up at a steep angle, the ocean dropping away, the sun in his eyes. A new sound came through the growingly powerful thunder of his motors. An excited, angry buzzing sound, a droning such as wasps might make, their nest violated. His co-pilot pointed excitedly. Killiard saw them, zooming from the right, perhaps a dozen fighting planes.

He wondered briefly what had happened to his three escorts.

Killiard yelled and wrapped his arms around Elizabeth, shielding her (CHAP. XVIII)

His bombardier blasted joyfully.

"Down the funnel!" he reported.

The ship was Killiard's now, his responsibility. There was no need for a return to the carrier. It was certainly sinking.

He pulled back on the wheel. The plane made a valiant attempt to raise its nose, but failed. Something was wrong.

As if anticipating the humming question that rose in his mind, the turret gunner took time out from his mad swiveling to report.

"Half the tail section slashed away," he reported.

Steve Killiard's lips thinned. He brought the Mitchell around in a long semi-circle. He saw the stricken carrier briefly, before he passed over it and left it behind. It was enclosed in smoke from stem to stern, its midsection belching clouds of steam mixed with greasy, thick, black vapors. In addition, the smoke-screen from the destroyer was drifting over it. In spite of these obtruding influences, it was evident that the five-hundred pound bomb, dropping squarely down the funnel, had exploded in the boilers. No ship could withstand such treatment and remain a ship. The carrier had cracked completely in two, its remaining load sliding overboard, its crew caught in an inferno from which there was no escape.

"Good job, Jim," Killiard said coolly. "The anti-aircrafts hit us though. We'll have to run for it."

His heart was beating in strong, steady strokes, his muscles were like iron, his nerves were keyed to that high pitch which bespoke his sure knowledge of danger. The plane was damaged, it had a dozen fighters harrying it, and its own escort had obviously been shot down.

Mitchells are tough. Enemy pilots are deathly afraid of them, even though there is but one gun turret. But the turret-gunner rides a swiveling merry-go-round which he kicks into action at will. While an enemy fighter jockeys into position, or tries to jockey into position, the turret-gunner merely follows him with the sheer murder that erupts from his weapon, blasts him out of the sky, and sweeps without stop onto another target.

Nonetheless, the plane was in bad shape, the fighters which pursued it were madly intent on knocking it into the ocean, and there were too many of those fighters. Whether the ship or its crew could live through the dangers which surrounded it was doubtful.

At that moment, scarcely missing the right wing, a Mitsubishi shot over the bomber, plainly revealing the emblem of the rising sun on its belly. It had come plunging directly at the bomber's flank, its sights lined on the fuselage, its guns chattering. The voice of the communications officer now spoke to Killiard somewhat faintly.

"Sorry, sir, the radio is out," he said. "We can't communicate with the rest of the flight. Machine gun fire tore through the fuselage."

STEVE KILLIARD spoke sharply. "Did he wing you?"

"Not badly, sir."

"Carry on," said Steve Killiard, biting his lip. He ran the sleeve of his left arm across the slight film of perspiration that had formed on his forehead, uncaringly smudging the yellow hash-marks—service stripes—above his cuffs. Two possible decisions lay open to him. He could notch back to the main site of the battle and hope for protection from the fleet's fighters. Or he could try to make base. Any way he looked at it, the bomber was in a serious predicament, and likely to be in a more serious one.

A Zero fighter showed up ahead of the bomber, crazily driving straight toward the nose. Steve Killiard momentarily saw the hunched-over figure of a Jap in the pilot cubby; then his attention was caught by the blood-red machine-gun fire coming from the Zero's wings.

The big bomber suddenly yawed over on one wing. Killiard heard a tremendous pounding, shattering racket, a vibration which shook the whole ship. With clarity, he understood what had happened. His hand darted forward, switched off the ignition to the motor on the right wing. Machine-gun fire had

shot the propeller away; the motor had proceeded to race, knocking itself and the wing apart—if Steve had let it.

Ahead of him, the damaging Zero fighter suddenly was ablaze with flame. It fell to one side, leafed away.

"Turret gunner reporting, sir," a voice said. "Two of the enemy shot down."

"Very good," Steve Killiard said automatically. "Keep at it." He spoke next to the bombardier. "Better jettison your load, Jim. We're no more good in this battle. We're going in."

In the belly of the plane, two doors swung outward and down. Three thousand pounds of bombs fell quietly, and blossomed into ornate, fiery flowers as they struck the sea.

Steve Killiard felt the effects of that loss of weight almost immediately. He had been losing altitude steadily. Now the altimeter crept up. But the air-speed indicator told him that time in the air was short. The nearest Australian mainland was four hundred miles distant. His base was fifty miles farther. But the mainland it would have to be. That is to say, if they could make it. Which, from all appearances, certainly did not seem probable right now!

CHAPTER II

Incredible Visitor

IN THAT momentous, incredible race toward the mainland, with enemy planes harassing the Mitchell, each moment Steve Killiard never expected to live through the next. But moments came and went, and he was still alive, though the arching plexiglass enclosure above him was riddled with bullets, though the fuselage had gaping cavities along its length, though part of the tail section had been torn away.

The furious wasping sound of enemy planes, running circles around the bomber, was a nightmare which after awhile dulled his senses. Even when the communications officer, who had previously been wounded, reported that the turret-gunner was dead, Killiard listened without emotion.

The communications officer took over the duties of the turret-gunner, who had left him with an escort of five hostile planes.

Two of those planes now exploded in the path of the ship. The three remaining planes went into crazy maneuvers, frantically trying to complete the bomber's demolition.

Low, tense with hope, the bombardier's voice rang out.

"Land, right ahead, sir," reported the bombardier.

Steve Killiard strained his eyes. Far away, perhaps ten minutes flight, he saw the low-lying Australian mainland, gray, featureless, hardly distinguishable from the ocean. His heart began a slow, sickening pounding. The remaining motor was overloaded, heroically fighting to hold the craft above the sea. And if the other motor were shot away it would be all up with the Mitchell.

Steve Killiard flicked his eyes at his co-pilot.

"Bail out when we hit the coast," he snapped. "That includes you too, Jim."

The gunner reported another plane down.

"What about you, Steve?" The bombardier's voice was strained.

"It's been a miracle we've come this far," Killard said. "I'll rely on another miracle to get us back to base."

After the co-pilot had disappeared into the hatch, he felt a closed-in sense of aloneness. That was dissipated somewhat when one of the two remaining enemy fighters slipped crazily to one side, out of control. Killiard had seen the pilot clap a hand to his breast, his face contorted in a cruel agony.

"So long, little yellow devil," Killiard muttered. He spoke to the substitute gunner, twice, but received no answer. He paled. He knew the answer to that. The average life of a gunner was thirty-four seconds, said the statisticians. That little hump on the fuselage, the revolving turret, was the most vulnerable spot on the whole ship.

"So long, old man," said the bombar-

dier. "See you."

"Sure," said Steve Killiard.

He did not see them go, but he knew they had gone, one after another, plummeting down for a thousand feet before they pulled the rip. The ship was now two thousand feet up, but slanting down at an increasing angle. His lips began to move in slow, passionless curses.

Meanwhile, one Jap ship relentlessly dogged him. Desperately, Steve Killiard heeled the big plane over, putting one wing between himself and a vicious stream of lead. A row of jagged holes appeared in the wing as if by magic.

He was defenseless now. The plane had no protection.

When his second motor was almost torn away from its mooring, he gave up. The plane's nose turned downward. He immediately locked his controls, twisted off his "bicycle seat," and descended into the open hatch. He crept down the hanging metal stairs, feeling the slip stream plowing against him. He could see below him, scarcely two thousand feet, the drear wastes of a treeless Australian desert.

He dropped.

He never knew what happened to the Mitchell, which had almost pulled through an incredible shellacking against incredible odds. He dropped like a stone, wind ballooning up through his pinks, while the earth below swelled up as if someone were pumping it full of air.

He knew a moment of fright which made him want to pull the rip cord before necessity demanded. He did not want to be machine-gunned in the air, though. At the last second, scarcely with eight hundred feet margin, he yanked viciously. The reply from the 'chute was immediate. There was a cruel jerk at his shoulders, a cessation of motion, a disappearance of air pressure. He seemed to float idly, but as a matter of fact, he was still falling with considerable speed which lessened gradually. Two hundred feet above the ground, he was descending at normal parachute speed.

He struck with body relaxed, and tumbled head over heels on the ground, pulling madly at the lower ropes to spill air from the 'chute. The 'chute emptied, folding up gracefully, and he lay still, panting.

Then, sounding louder every passing second, he heard a sound that chilled his blood; the drone of a diving plane. He looked up once, wildly, saw the Mitsubishi boring down, motors wide open. The deadly coughing sound of a machine-gun came.

Steve Killiard threw himself flat on his face, locking his hands over his head, frantically trying to make himself as small as possible. The thunder of the plane mounted, crescendoed into one deafening peak of sound.

NEAR him, Steve heard the peculiar *spat-spat* of lead fluffing the ground, literally weaving a circle around him. Then the plane swooped up.

Steve jumped wildly to his feet, looking for cover. But on that whole barren plain there was no tree, no shrub, no rock. Quickly he freed himself from the parachute harness and stepped clear of the gear. Next he flung back his head and looked upward. The Jap was on the way down again.

Something erupted in Steve Killiard. He knew with a cold, reasoning clarity, that the pilot would not miss this time, and he had no desire to die with his face to the ground.

He took a stance, feet braced, the hot sun bathing him with a heat that was welcome in this last moment of life.

He shook his fist at the approaching plane.

"Come on, you yellow pirate!" he roared. "You'll kill me, but one of us will kill you, you hunk of yellow meat. I'd do it over again if I had the chance. I'd do it over a thousand times, if I could blow you and your sneaking race off the map. Come on, kill me."

Bravado, an inner something was telling him. But he ranted on, panting out his hate, filled with an obscene loathing for this pilot and his kind. His own death seemed nothing, now. He was remembering his own sister, imprisoned by

As Steve Killiard watched, the Jap plane flew into fragments and burst into flame (CHAP. II)

the Japs in Hongkong. She was dead, now; and how she died he could guess. . . .

The Mitsubishi slanted down, and its guns began to chatter. Steve Killiard waited for those bullets to find their mark.

And then two events occurred simultaneously.

Steve Killiard's vituperative flow was chopped off as if by an axe. Fifty feet away, materialized from out of the air, a strange cylindrical object—a ship of some sort—had appeared. Around it hung a faint nimbus of light, pale, tenuous in quality.

Secondly, the Jap plane had stopped in mid-flight. Then, magically, it turned into shattered debris and burst into flame. The blazing fragments slid futilely down to the ground as if it were falling down the outside of a dome!

In a second the Jap pilot was dead, his guns silenced, his plane a heap of burning ruins. Although surprised Steve Killiard stood there and contemplated the result with a cold, cynical eye. Two years of war had taught him to rely only on his two hands, his own brains, and his highly alert senses. Outside influences rarely stepped in to swing events in Steve Killiard's favor. There were few miracles.

He reached blunt fingers into an inner pocket, extracted a cigarette, and lighted it with a gold cigarette lighter a girl had given him in Brooklyn, centuries ago, it seemed. Centuries ago, when one was young, and love and laughter were the most important things; when one's heart was light, and when one had great faith in humanity. Yes, that was centuries ago; for surely it would take centuries for one's outlook and whole philosophy to change, for all the young love and laughter to turn to hate and scowling bloodlust. . . .

The smoke soothed his taut nerves.

He proceeded to study the ship which had materialized from thin air. English, American, Chinese, Japanese, Russian? Neither. This was no aircraft. It had no visible means of propulsion, and its stem was indistinguishable from its stern. Along its cylindrical length—one hundred and fifty feet of length, perhaps—was a row of portholes; and beneath those, slots which could easily have been gun embrasures of some sort.

Studying the port-holes, Killiard thought he saw three or four faces staring out at him. He stared back, without friendliness. He would show small gratitude for an incomprehensible rescue until he found out why he had been saved. He frowned a little when he thought he saw a feminine face looking out at him with interest. The strange ship descended to the desert, not far away, where it landed without a bump.

Killard's attention was attracted by a smooth sliding sound. In the circular end of the ship nearest him, an oblong of metal slid to one side. A man edged his vast bulk through the opening with some difficulty, and stood looking at Steve, his great booted feet forked, his be-ringed hands on his staunch hips.

"Entrez, donc, étranger," he called. *"Ne restez là comme un arbre."*

FRENCH, Steve Killiard thought, with a slight start. The Free French forces of de Gaulle. What in the name of heaven were they doing in Australia? Then he reconsidered, and felt a strange, eeriness at the reconsideration. This was no modern French.

There was a peculiar slurring, a peculiar guttural tone, a peculiar misplacement of accents.

And this was no modern man, to judge by his appearance. The first trickle of doubt, the first startled belief that he had run against something abnormal, came to Captain Steve Killiard. Too, curiosity jumped to the fore. A ship, that appeared out of nothing. A strange barrier, invisible, yet necessarily as solid as steel to be able to halt a Jap plane at the full downward sweep of its flight. And a man, dressed in a clown's suit, red on one side, green on the other, a naked dagger hanging from his right hip, a holstered weapon of some sort strapped against his left thigh.

Killiard addressed him sharply.

"Qu'est-ce que c'est que celà?" he de-

manded. "What goes on? *Qu'appelez-vous, monsieur?*"

"Friends," the big man answered, with a show of impatience. "And your French is as bad as your manners. Though that can be explained by the French-yellow Fork, eh? *Allons, donc—allons, donc!*"

He turned back inside the ship as if not doubting that Steve Killiard would follow.

Killiard hesitated for only a second. Then, with a feeling that he was entering upon an adventure he had not bargained for when he signed up with the armed forces, he flipped his cigarette away, and strode in the doorway in the hull of the vessel.

He walked down a low tunnel, bending his head slightly. A garishly garbed man stepped to one side to allow him to pass. As Killiard emerged from the tunnel into a colorfully furnished room, he heard the tell-tale sliding of the door, as it went back into place. His senses jumped to the alert. He remained with his back partly to the wall, and turned his narrowed eyes on the occupants of the room.

There were three of them. One was the huge, blond-haired, clownishly dressed man who had first addressed Killiard. The second was a younger man, dressed in black leather boots which flared out at the sides. His trousers were tight and black, his jacket was open and loose, revealing a loose white silk shirt with the collar open. A broad-brimmed black hat, attached by a strap around his deeply bronzed neck, hung back over his shoulders.

He was watching Steve Killiard with interest.

THE third person was a girl, legs and arms quite bare. A kilt strapped around her waist fell halfway to her knees. Her blouse was covered with a myriad little bells, of innumerable colors. Her wrists, ankles and throat sparkled with what must have been thousands of stones. She was leaning on a three-legged table which came up almost to her shoulders, one ankle crossed over the other.

"*Oui,*" she spoke, carelessly running her eyes up and down Killiard. "A fine specimen, father. He'll do. But I doubt much that I'll ever find a slave to replace my stalwart Roman." She shook her head sadly. "You should never have shot him, Phillipe."

He, with the broad-brimmed hat kept his impassive eyes on the American pilot. "The fool was falling in love with you already," he sneered.

She turned her dark head after a moment, regarding Philippe through lidded eyes.

"Your jealousy becomes tiresome," she said coolly. "Mind you don't lose your temper on this new creature."

"Come, come!" The big man, obviously the girl's father, clapped his great hands resoundingly. "By Saint Joan, God preserve her ashes, can't you see our captive is itching with curiosity? Best to explain his situation, and then discuss his merits as a slave."

He rubbed his hands together with a sandpapery sound, looking slyly from the girl to Philippe, and then to Killiard. "But I wager this one will fall in love with you, too." He threw back his yellow mane of hair and revealed his polished white teeth as he emptied his lungs in one burst of laughter.

The girl looked at him disapprovingly. Then she turned deep greenish eyes back to the pilot.

"Do not think us ill-mannered," she said. "After you've been with us awhile, a great many puzzling factors will clear themselves up. Since you'll be taking orders from me hereafter, you may as well get used to the sound of my voice. I'll take a moment or so for an explanation. However," she added, in a tone of warning, kindly do not fall in love with me. As an idea of what you may expect if you do, Philippe has already killed three of my slaves."

Steve Killiard still stood with his back to the wall. A cold stiffness had taken hold of his muscles while he listened. Whatever situation he had stumbled into, it hinged somewhat on madness. The girl's last words brought him back to practical affairs.

He crossed glances with her, allowed a trace of scorn to appear in his eyes.

"Not a chance, sister," he said slowly, deliberately.

She came to an upright position.

"What is that?" Then a slow flush started up her face. Killiard continued to stare insolently.

"Silence!" she snapped.

She took two quick, impulsive steps toward him, her hand falling to the weapon strapped around her bare waist. Then as suddenly she relaxed, a smile playing around her full red lips. She studied him through long-lashed eyes, seeming to see him for the first time. She cast a hasty glance at Philippe.

"We shall see about that, eh, Philippe?" A mischievous tantalizing dimple appeared in her tanned cheeks. "This creature says there is not a chance to fall in love with me. We shall see, eh?"

Philippe shrugged indifferently. His hand touched suggestively at his weapon. "As you like, Elizabeth. You find your pleasure in strange ways." Then he added one grim comment.

"I know how to handle impudent slaves," he said, touching his weapon with sinister significance.

CHAPTER III

Pirates of Parallel Worlds

WHIRLING around, the girl seemed as if to remonstrate with Philippe, but she checked the impulse when the man resumed his posture of easy indolence. Facing toward Killiard again, she extended her hand toward her father in a sudden gesture.

"This is my father, slave—Simon of Chadres, Imperial Captain of the United Free Cities of the World." She chanted it out. She added, as an afterthought, "The world, in this case, being the French-dominant branch of time."

Killiard held himself in, but his impulse was to explode with a cry of disbelief. His pulses raced, as the full, incredible meaning struck at him with the force of a blow. He stared at the three occupants of the room. Facts and phrases swam in his stunned mind. A slurred, unreal French—"stalwart Roman"—and now this. French-dominant branch of time!

He sagged against the wall. These people were not real—this ship was not real. In his universe, in his branch of time, they had never existed.

They were shadow-people. They were unreal. They belonged to a world-that-might-have-been, a world of probability.

They were shadow-creatures from a world of if!

He stood there motionless, while his mind struggled to absorb what he had learned. The shadow-creatures stood in various attitudes of motionlessness, as if they were lifeless indeed. But it was apparent that they sensed the mental shock that was his. They were silent, waiting considerately for him to recover. And he did recover, at last, but he hardly heard his voice above the pounding thud in his ears.

"D-delighted," he stammered at Simon of Chadres.

The girl smiled a relieved smile.

"It is difficult, at first," she said sympathetically. "But you will understand. And this is Philippe de Paus, our chief navigator."

The slim man nodded indifferently in Killiard's direction.

"And I, of course, am your owner—Elizabeth of Chadres. But first of all, we'll mind our good manners, and give you an explanation." She pursed her lips thoughtfully, as if searching for words. Finally, "Ah, yes. It should not be hard, slave. You have already grasped the fundamental facts. We are from a French-dominant time-branch. You are from a yellow-dominant branch."

"Yellow-dominant." The words snapped from Steve Killiard's throat. He pushed himself erect, a tight coldness lumping in his throat.

Her thin eyebrows moved upward in some surprise.

"I see," she said cautiously. "You still conceive your civilization to be Cauca-

De Paus pressed the trigger and Killiard fell paralyzed to the floor (CHAP. V)

sian-dominant. Please disillusion yourself." She shook her dark head firmly. "Being in the middle of it, naturally it would be hard for you to see the truth. However, the truth is the truth. Your civilization during the last two years has changed over from English-dominant to Yellow-dominant—or perhaps I should say Japanese-dominant."

"That's a lie," Steve Killiard shot it out thickly, his temper flaring. "We haven't even begun to fight yet."

THE girl frowned. She looked questioningly at Simon of Chadres. The big man made a quiet, gentle motion with his hand. The girl nodded.

"The subject is debatable," she said gravely. "However, be that as it may—"

"Never mind," said Steve Killiard. "I get it." He discovered himself suddenly to be shaking. A cold, impalpable dread had gripped him. Not because he suddenly knew where this ship had come from—that these people were shadow-creatures from a world of "if," a world of probability—but because Elizabeth of Chadres had so coldly analysed the true situation in his world, his branch of time. Japanese-dominant! The thought had talons in it. It made him sick. He had not struggled with his heart and soul for two years only to discover that the battle was already lost, had he? And yet—

He fought himself, fought back the weakling misery in him, and jauntily raised his head. The three shadow-peo-

ple—for such they were, relative to him and his time-branch—were looking at him curiously; Elizabeth of Chadres with a startled sympathy in her greenish eyes.

"Go on," he said.

She did go on, after awhile, giving him the broad truths; and Steve Killiard received a picture of a universe that was not so limited as scientists had conceived it. There was no limit. There was not one universe, one time-path which matter followed, there were not two, or three, or merely a half-dozen; there were an infinite number, a spider-web tangle of forking continuums. Worlds of probability—without end!

Perhaps, by some chance, life would never have evolved on the planet Earth. Perhaps? There was such a "perhaps" world—real unto itself; and it was but one of an infinite number of other "perhaps" worlds.

Perhaps, again, life had never left the sea, creating a world of "if" where no human life abounded; there was such a world.

Perhaps Columbus had never discovered America . . . perhaps . . . perhaps . . . and perhaps Jeanne d'Arc was not burned at the stake by the English, and in the year 1431 A.D. marched a victorious army into his Britannic Majesty's capital . . . and the French had retained their dominance through the centuries up through the present, 1943 A.D. . . .

"Such is the story," said Elizabeth of Chadres. Her long slim fingers played idly with the multi-colored bells on her white blouse. "In your civilization, the French are in defeat. In our civilization, we own the world."

Steve Killiard nodded, with a touch of grimness. "A slave-civilization?" he suggested.

"Of course." Her brows arched in puzzlement. "And why not? We would not work for ourselves. As a matter of fact, being a fighting race, we manage to find everything we need in other branches of time—those we are not friendly with, that is. At this moment, we are on the way to a silk-warehouse in an English-dominant branch of time."

"What?"

The word hurled from Killiard's throat. He whirled around, looking down the narrow tunnel behind him. The garishly clad man stood in front of the door, arms folded. Killiard, turned, brushed past de Paus, and pressed his face to a port. Outside, there was nothing but a gray, featureless mist. The sickening truth came to him; not only concerning his own predicament, but also concerning the nature of these people. A slave-civilization; moreover, a pirate-civilization!

He turned very slowly, advanced a half-dozen paces to face Simon of Chadres.

"Look here, clown," he said menacingly. "I'll put my cards on the table. I don't want to have anything to do with you and your gang. Thanks for the favor, pal. I appreciate your saving my life and all that—but I don't want any favors from you. I belong to a civilization that's been fighting a gang of pirates. I don't intend to become the slave of a gang of pirates. I don't want any, understand? You can turn this boat back and let me out where I came in. Now."

Simon of Chadres met his level stare for a long moment, his glance mild. "By my patron saint," he said softly. "You've lost your manners entirely, *n'est-ce que pas?*"

LITTLE dagger-points of light began to flicker in his eyes, but his smile continued. And Steve Killiard never knew what hit him. Something smashed with pile-driving force against his jaw, and he was hurled back through the air. He vaguely remembered somebody catching him and easing him to the floor—de Paus it must have been.

Before his senses drifted off, a booted toe dug with cruel force into his side.

A voice roared. "Clown, am I?" it said. "When we saved his miserable, fly-specked life. François! Georges! Drag this ill-begotten *cochon* away!"

Upon regaining his senses, Captain Steve Killiard rolled over with the remains of a nightmarish dream hovering

on the edge of his conscious mind. Somebody had spilled yellow ink on a white blotter, and the ink was spreading, spreading. . . .

He awoke slowly, the links of memory dropping into place until they formed the complete chain. He was lying flat on his back, enclosed by a gloom relieved only by a soft dismal radiance dribbling through the bars of a door—a cell door.

He pushed himself up on his elbows, working his jaw back and forth wryly. Wow! Who'd have ever guessed that the clown in the red and green suit would turn out to be a tough baby?

"Slight miscalculation there, Steve, old boy," he thought to himself, storing the fact away for future reference.

He was in a cell of course—ship's jail, "brig" as it is sometimes called. Simon had thrown him in here to cool his heels. It was a bare little place, windowless, without furnishings. But as his eyes accustomed themselves to the partial darkness, he saw another man sitting against the opposite wall.

"Buenos dias, señor," the man said. His voice was soft and liquid.

"What's good about it?" Killiard demanded in English. Then he added, *"No hablo Espanol, señor. Est-ce que vous parlez francais?"*

"Sí, sí." The little man nodded energetically, breaking into a brilliant, delighted smile. "But I also speak the English senor." He hunched forward, staring intently as Steve came to a dizzy, cross-legged position. "Perhaps you crossed sword points with Simon?" he suggested.

"Crossed sword points isn't any word for it," Steve said feelingly. "I was in the middle of telling the guy off when he socked me."

"Socked you?"

"Lambasted me. Kayoed me." Killiard laughed. "Ploughed into me with his fist."

"I see." The other made a clicking sound of sympathy. He was a small, wiry little man. Even in the dark, Killiard could see his long black hair, straight except where it dropped down around the ears and evolved into crinkly curls. His complexion too was dark, almost negroid. Killiard was later to learn that he had Moorish blood in his veins. He shook his head now. "That Simon is a dangerous man for all his bluff laughter. But tell me your story, señor."

His eyes sparkled with interest as Killiard recounted the events of the last six or seven hours.

"Yes, yes." He nodded energetically. A spasm of disgust crossed his face. "Elizabeth is a vixen, and for all the good manners that these French devils lay claim to, she's as treacherous as her father. A bad-tempered, ill-mannered brat. Of course, it's a matter of her upbringing." He shook his head in disapproval. "Now in my civilization, señor—" he leveled his forefinger at Killiard—"in my civilization, the señoritas are carefully guarded until they are ready to be given in marriage. Such we conceive to be the proper upbringing of our girls. But this Elizabeth, she swaggers around with all the freedom of a man."

Killiard had to smile.

"Perhaps," he conceded.

"Watch out for Elizabeth, señor. Her boast to make you fall in love with her was no idle one. She has wiles which would make the most strong-hearted lose his reason. Then—pftt! You'd find yourself with de Paus using a thermoray on you. A thoroughly bad combination, those three."

"You have difficulty with Elizabeth yourself, perhaps?" Killiard hazarded.

The other stared incredulously.

"I?" He burst into a delighted laugh. "My dear young man! I am fifteen years her senior. And besides that, back in Madrid, I have a wife of my own, and *dos niños.*"

HIS dark, sensitive face saddened. He relaxed disconsolately back against the wall.

"Madrid," he sighed. "I do not think I will ever see it again. I was happy there, *señor,* until these French devils stopped a defenseless English-dominant ship, and kidnapped me. I had just completed my work with Helvina Osternog

on the artificial causal-thrust unit; and, ideed, was close to being finished with my transmaterio. Helvina herself stated that she would soon find herself free to help me with that. Of course, the reason the pirates kidnapped me—"

Killiard broke in.

"Whoa!" he admonished in a startled tone. "Back up! I'm hip deep in big words. Suppose you tell me your story, now."

The other was instantly apologetic.

"Of course," he smiled. "Permit me to introduce myself. Alonzo del Azanto y Lucientes del Morales. By special dispensation from the king in charge of the laboratories of the University of Madrid."

Killiard jumped to his feet, followed by del Azanto.

"Captain Steve Killiard, U.S.A."

The men shook hands, and del Azanto bowed from the waist.

"It is a pleasure," said the Spaniard. "I feel, señor, that we will go through much together before either of us returns to his homeland."

They stood for a moment, each mutually appraising the other. Killiard felt a warm glow. He had an instant liking for the wiry, energetic little Spaniard; and somehow, he, too, felt that they would share in momentous events together before the adventure was over.

He released his hand and del Azanto searched his face. "Now let us see, señor," he said suddenly. "You come from a yellow-dominant branch, eh?"

Killiard was hollow inside for a moment.

"That's what Simon said," he snapped after awhile. He ground his teeth. "It's a screeching lie, though."

Del Azanto held up a hand.

"I see," he said quietly. "Being in the thick of the action, it is difficult for one to see the truth. Please do not let me hurt your sensitivities, Captain Killiard. We who travel the time-branches do not often trouble ourselves to ascertain events in branches with which we have no communication. Yet it is well known that your particular branch is yellow-dominant. Half of your world belongs to the Japanese. It is too bad. There is no stemming the tide."

Killiard lighted a cigarette. A screen of smoke partly obscured his face.

"The battle's over, eh?" he said without emotion.

"Just that." Del Azanto laughed suddenly, and clapped a hand to Killiard's shoulder. "Don't worry about it, *amigo*," he advised. "Not too much. Think of the infinite number of time-branches, where the Japanese have not conquered. One becomes philosophical with that knowledge, after a time."

Killiard fell into an indolent, at-ease position. "Of course," he said sarcastically. "And in another time-branch you hold your wife in your arms."

A gray, haunted look of hopelessness appeared on del Azanto's thin face. His head bowed momentarily. Then he raised it, smiled faintly, with a hint of shame.

"One can always be philosophical concerning the affairs of others," he admitted. "Forgive me. Even I, scientist that I am, at times fail to take into account certain truths about the time-branches. From a broad point of view, there are numberless time-branches, one for each event, no matter how small, that might have been. For us—" he spread his hands—"there are only those which are roughly a century apart in actual history. Causas, the units of causal-thrust, decrease with the increase in years, that is."

"Which means," said Killiard, "exactly nothing to me."

Del Azanto was rueful.

"It is difficult to explain. Very well. We will take your time-branch and my time-branch as an ex—"

"Wait a minute!" Killiard jabbed a forefinger. "You mean to say that you come from still a different time-branch?"

"Of course, Captain. A Spanish-dominant branch."

"Ye nightmares!" Killiard yelped it out. "Pardon me, Azanto, while I sit down or else go into a spin."

But he did not sit down. He stared at Azanto as the pieces of the truth fell together. It was now supremely evident that, unsuspected to Killiard's own,

world, a busy intercourse went on between a heterogeneous mass of other worlds, beyond the ken of humanity. Time-branch ships, able to span across to other worlds of probability. Passenger service existed between those time-branches. Wars were fought and goods traded. Spanish-dominant civilization, English-dominant, French-dominant—all were there. And Japanese-dominant regions might also be a fact.

He wiped a hand across his sweating forehead. He was not sure he was going to like all this, especially the Japanese part of the scheme!

CHAPTER IV

A Through-Matter Ship

DEL AZANTO stood looking at Killiard for a few moments with an expression of sympathy on his face.

"It is difficult for you to grasp, yes?" he asked.

"Difficult isn't any word for it," Killiard breathed. "But go on. You were saying?"

Del Azanto energetically turned to the sombre wall, drew an imaginary "tree" with parallel branches sticking from the "trunk."

"The trunk," he explained rapidly, "is your time-branch. I could as well signify my time-branch by the trunk, but that is egocentric." He grinned. "Now, here is the point where my time-branch—this limb—forked away from your time-branch. The year is 1531 A.D.—four hundred years ago."

Killiard's interest showed in his eyes. "What happened then?"

"The Invincible Armada of Spain successfully landed an invading force of 28,000 men on English soil. England was conquered and invaded—by the Spanish. But in your time-branch, the Invincible Armada was defeated. That is the fork from which our two branches extend.

"Go on," Killiard urged him. "So far I follow you all right."

"Time proceeds at the same rate in all branches, and the year for both of us now is 1943 A.D.," the Spaniard continued. "So at the moment of forking away, four hundred years ago, one million causas—a causa is an arbitrary unit of causal-thrust—were created. Had there been such things as time-branch ships in those day, it would have been quite impossible to cross back and forth between those two time-branches—not until after one hundred and ten years had passed."

The picture gripped Steve Killiard.

"Causal-thrust decreases with the increase of years?" he hazarded.

Del Azanto beamed. "Exactly. And according to the inverse square. After one hundred and ten years, the causal-thrust or repellent force between the two time-branches decreases to eighty-three causes—eighty-three point two three oh five, to be exact. Against a greater force than that, the parallelochron motors of a time-branch ship can-

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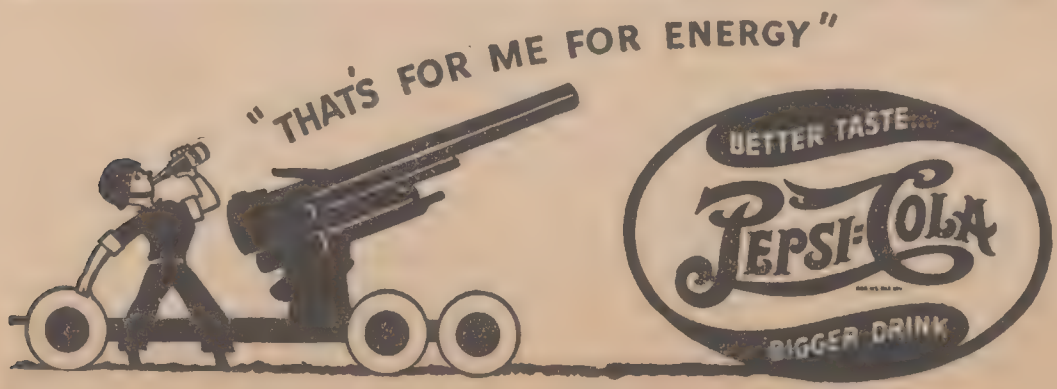


not operate. The basic theory of their construction makes it impossible."

Del Azanto frowned for a moment before continuing.

"In a way it is a good thing. There is no possibility of one running into one's self in another time-branch."

Killiard suddenly stamped on his cigarette, his thoughts dark.

"So even if there are time-branches where my countrymen have not lost the war, I couldn't get to it, anyway. Not that I'd want to," he added drearily. He sighed, again surveyed the scientist. Something was working at the back of his mind, a thought he wanted to express.

"This transmaterio," he said suddenly. "That means 'through-matter,' doesn't it?"

Del Azanto shrugged. His eyes lit with a fierce memory.

"A new kind of ship Helvina Osternog —she is of an English-dominant branch —a new ship we were working on. It works on the theory that two objects can exist in the same space if the orbits of their molecules do not coincide. We intended to use it to discover new ore deposits. The completed ship would pass through solid matter the way an undersea ship moves through water. Except that the transmaterio ship will actually move through solid matter. If it is ever completed."

His eyes suddenly sparked with anger. His fist smashed into his palm. He began to walk agitatedly up and down the cell.

"If anything is ever completed now," he said vehemently. "They kidnapped me. I was in London, the English-dominant London, you understand, working with Helvina Osternog, Curator of Government Laboratories, which makes her practically the ruler of England, of course. A clever woman, that Helvina, but dangerous in her own way. In this case, we were turning our energies against the French—pirates all, Captain Killiard—and were letting the completion of the transmaterio wait."

He gave Killiard a brief resume of the French-dominant civilization. Simon was a king in his own right, but a king of pirates. His dominion spread over all of Europe in his own time-branch. America, Asia, Africa, Australia—these continents were in the hands of savages. Simon had no traffic with them, and they knew little of him. But Europe was his, organized into a pirate civilization under the name of United Free Cities of the World.

IT QUITE literally was a pirate civilization, devoted solely to raiding rich time-branches.

"And let me warn you now," del Azanto snapped. "These pirates are treacherous dogs, but they are no simpletons. If you harbor thoughts of escape as a prisoner, get rid of them. There is no escape. Not unless you play along with them, and deceive them as they would deceive you."

Killiard laughed unpleasantly.

"Not if I have to play floor-mat to that brat Elizabeth."

Del Azanto made a fierce gesture.

"Play floor-mat to her, as you call it. Sometime you may find the opportunity to escape. If I dared deceive them—but no! What they want is the neutralizing machinery—they would force me to build them a workable machine."

The fire died from his dark eyes. His shoulders sagged. He spoke in slow, precise syllables.

"Helvina's and my object was a simple one, Captain Steve. We succeeded to the letter. In London today stands the artificial causal-thrust station. In my own time-branch there is an auxiliary station, almost completed." He made a weary gesture. "You understand, of course. If we could create an artificial causal-thrust of five-hundred causas, set it up like a wall around Simon's time-branch, his ships would never be able to break through. His pirating activities would be over. But now—" He stopped.

But he told Steve Killiard the rest. Simon had spies in the English-dominant branch. He had discovered that the causal-thrust station was completed. The work finished, del Azanto had left for his own time-branch in an English-

dominant passenger liner. Simon had intercepted the defenseless craft, had taken del Azanto off, threatened him with life imprisonment and torture if he did not build neutralizing machinery. Del Azanto thus became Simon's ace-in-the-hole. With del Azanto in captivity, Helvina Osternog did not dare put the causal-thrust barrier around Simon's time-branch.

Steve Killiard listened sympathetically.

"There must be some way to escape."

"How?"

Steve Killiard said grimly, "That transmaterio ship will work, won't it?"

Azanto looked up in surprise.

"Why not?"

"Listen," Killiard said fiercely. He gripped the scientist's arm in high excitement. "I've some plans of my own to make. I'm going to escape, and I'm going to get you out of Simon's hands, too. By Heaven, I am. And then, with your permission, I'm going back to my own time-branch—with a transmaterio ship!"

"You mean—?"

"That's what I mean. The transmaterio is a weapon—a real, honest-to-gosh weapon."

There was an interruption.

"Attention!"

A COLORFULLY clad pirate guard rattled keys at the cell door, swung it open. He looked at Steve Killiard.

"Le capitan demande a vous voire!" he said. *"Allons!"*

Killiard surveyed the pirate with a grim twinkle in his eyes, then turned back to del Azanto.

"Thanks for the advice. I'll be doing just that. But the other—is it a bargain?"

The faint glimmer of hope showed deep in del Azanto's eyes. His affirmative answer was voiceless. Killiard turned and stepped in front of the guard.

The guard jabbed Killiard with his five-barrelled weapon.

"Don't make any secret bargains, fool," he growled. "There hasn't lived a man yet who's got the better of our Simon."

Killiard shrugged stoically. On the upper deck, they paused before an ornately jeweled door. The pirate kicked it open, urged Killiard in, and kicked it shut.

"Here's the scoundrel, captain. Get up to the desk, you."

Killiard walked slowly forward. The pirate guard threw himself democratically into a wicker chair facing Killiard, sprawled out, and began to pick his teeth, all the while holding the wicked-looking weapon on his prisoner.

Simon of Chadres leaned back in his chair, his great hands buried in the pockets of his clownish suit. There was a look of singular glee in his tawny, wide-spaced eyes as he looked up a steep angle at Steve.

"So!" Simon rasped. "How's your jaw?"

KILLIARD blinked. His hand moved up to the injured member. "All right now."

Simon roared with laughter. Abruptly he stopped. "Who's a clown?" he barked, menacingly.

Killiard smiled in spite of himself. "I've changed my mind," he admitted.

Simon leaned forward and pounded his desk with unexpected joyfulness.

"I thought so!" he cried. "Now, by Saint Jeanne d'Arc—bless her for saving France—you aren't the first to make that mistake. You make the hundredth, by heaven, and of them all, only a round dozen have escaped their just deserts. But I like you, understand?" He swore roundly, shaking his mane of yellow hair back and forth. "Now don't ever call me a clown again," he warned, threateningly.

He lunged forward and grabbed up a jeweled dagger from the desk. He began to toss it up and down in the air, catching it expertly by the haft, his eyes flicking back and forth from Killiard to the dagger.

"Now listen here," he said. "It's the law in our world that when somebody saves somebody's life, the rescued man

becomes his rescuer's slave. Elizabeth saved your life. I saw her myself. She was looking through the port visichron, studying your yellow-dominant branch the way she always does when we're in this neighborhood. She saw you standing there, bluff as you please, shaking your fist at that dive-plane.

"So she asked me to save your life, Killiard, and I did. I stopped the ship plop down in the middle of that desert and threw up a force-dome. Smash went that plane." He burst into an indignant laugh. "I don't like those Japanese myself. But that's neither here nor there. In our time-branch, they're a bunch of uncivilized savages. They stay on their island, and we stay in Europe."

He swung around in his chair, apparently fascinated with the rapidly ascending and sparkling dagger.

"All right," he boomed out raggedly. "You don't want to be Elizabeth's slave. Good enough. Maybe I don't blame you. She's a hard girl to get along with, is Elizabeth. I've been too busy feeding my mouth and the mouths of my people to give her a proper upbringing. So I'm countermanding Elizabeth's orders for a slave. She can get one some place else."

He stopped throwing the knife, whirled around, and pointed it at Killiard, his yellow eyes narrowing to slits.

"Listen!" he snapped. "Do you want to become a fighting man under Simon?"

"Huh?" said Killiard. It had all been too fast for him. The running patter had numbed him with its sheer weight.

"Think it over," said Simon, slamming the dagger on the desk, leaning back and stuffing his hands into his pockets. "Think it over. I'll give you thirty seconds to make up your mind. If you don't want to become one of my fighting men, you go out the hatch. There's a time-branch outside right now where kangaroos are dominant. They don't know anything about time-branches. You'll be stuck there. We've been stuck here for the last hour ourselves. One of the causaclasts blew a fuse. Well, think it over."

He drew his hand out of his pocket, cocked his tawny eyes at a jeweled finger-watch on his little finger. The seconds ticked by. Killiard's tongue stuck in his throat from pure astonishment. Simon restlessly jiggled back and forth in his swivel chair, looking at the walls, at the ceiling, apparently thinking about a thousand things at once. He seemed to have forgotten Steve entirely.

"When," said Steve, "will I see action?"

Simon heaved himself erect, pushed himself around the desk, and clapped a hand on Steve's shoulder with cruel force.

"Excellent!" he cried. "You'll be paid and fed well, and you'll have adventures such as befits a man of your type. Of course, in the end, you'll probably die with a hole in your stomach, but that's the price. Henri!" He barked at the still indolent pirate guard. He jerked viciously at Killiard's regulation uniform and brass buttons popped.

"Take him down to the supply lockers and break out some decent clothes," ordered Simon. "Something colorful. Now get out of here!"

Steve dazedly followed the guard, who had holstered his weapon. Now he evidently regarded Steve Killiard as a friend.

CHAPTER V

Interworld Raid

TEN minutes later, Steve Killiard found himself alone, in a room near the lower hold. His uniform, including the wings he had been so proud of, was gone. In its place, he was wearing a pink and yellow vertically striped jacket over a white-silk, open-neck shirt; hip-high red leather boots and skin-tight deep-red pants. He had been given no weapon.

He felt faintly horrified at himself.

Nonetheless, as he left the hold of the ship and cautiously ascended a ramp which led upward, the one or two pirates who passed him on the way down unwittingly furnished consolation. And gar-

ish though their costumes were, the colors managed to blend pleasingly. The pirates themselves glanced at him curiously, but gave him no more attention than that.

The ship was more immense than he had thought. Halfway up the ramp, he poked his head in a doorway, found himself on a balcony. Below was a long broad room, the center of which was pyramided with incomprehensible machinery. The casing to one of the parts was open, its interior workings, gears, pistons, and insulated wire, scattered over the floor. Two men were busily working over the machine, which Killiard guessed was the "causaclast"—causa-breaker, he translated it.

Shaking his head in growing astonishment at the existence of a universe, a whole series of universes, that was unsuspected by his own time-branch, he ascended and came out on the midships deck.

A steady yellow radiance flooded through the rows of ports. Chills touched his spine as he went toward one of the ports. But the scene, save for an unusual lushness of vegetation and what seemed an abnormally brilliant sun, was little different than he might have seen in a tropic setting.

He turned away, and then caught his breath. A peculiar tight sensation started in his stomach. Elizabeth of Chadres was walking indolently down the deck toward him.

She stopped.

"Hello," she said. The bells on her blouse were tinkling gently. Killiard thought it must be in rhythm to the beating of her heart. He was suddenly glad he had no such bells to betray his own pulse. For it had risen disastrously. He felt disappointed in himself.

"Greetings," he said. "How's the slave-running traffic today?"

Her eyes flickered.

"The question is not calculated to gain my friendship," she answered thinly.

"Who said I wanted it?"

Her full red lips quirked up into a slow, glorious smile. "I see. You are getting off on the right foot. We will drop the subject. What do you think of my father?"

"Of Simon?" Killiard shrugged. He ran the tips of his fingers down the front of his jacket. "Anybody that can make me get into clothes like this voluntarily isn't ordinary by a long shot."

She nodded thoughtfully. "My father spills over with nervous energy," she said, as if the subject were of absorbing interest to her. "If you ever get close enough to him, you'll feel the heat pouring from him. He burns up food at an enormous rate. His mind is the same way. It demands much food. He is a lover of beauty. He loves color and lots of color. What is your name?"

Steve Killiard told her.

"Steve." She mulled the name around on her lips. "Ah, yes, Steve. You are one of us now, Steve—apparently." She smiled at him significantly, and shrugged. "I understand your reservation, Steve. You do not like us. You think my father is a fool for taking you—for forcing you in without a proper understanding of your motives. You must merely bear in mind that my father trusts no one, anyway. He is eternally suspicious, though he seldom shows it. It is what has kept him in the position he now occupies. Del Azanto—" she shrugged—"well, you know about del Azanto."

She stopped abruptly, as if she were letting the rest of the conversation up to Steve Killiard. Her greenish eyes rested on him questioningly. Killiard felt unsteady. There was a supple, tanned beauty about this girl that was unnerving.

SHE lacked the cloying coyness that some women thought desirable in their makeup. She looked at him as a man would look at a man; yet, deep beneath that, was the confident, proud knowledge of her femininity.

"Your father is a strange man, Elizabeth," he said. "But he fits into his niche."

Her answer was quick with interest. "What do you mean by that?"

He countered with another question.

"What do you think of the pirate civilization your father runs?"

Her thin brows drew down. "What do I think of it? What should I think of it?"

"Don't you think it's wrong?"

"Wrong?" She burst into an astounded laugh. "Of course not. What's wrong with it, Steve?"

He held her glorious eyes intently.

"It's a pirate civilization, isn't it?" he insisted. "You raid and plunder other civilizations—other time-branches, don't you? Is it right to take what other people have worked for honestly?"

"But—but—" She stopped for a moment, her eyes bewildered. She added gently: "You don't understand, Steve. Those other time-branches—they don't exist. They are shadows—unreal. What happens to them does not matter. It is only our time-branch that is real."

"Have you ever considered that maybe your time-branch is the unreal one to other branches?"

She laughed. "They can hardly think us unreal when we steal their goods." She frowned. "But I see what you mean. The thought is somewhat new. They never introduced it at the University of Paris where I studied philosophy."

Killiard exploded. "New! Good heavens, girl, where have you been all your life that you couldn't figure out something like that for yourself. If they taught you that kind of philosophy, they taught you lies. People are people, real or unreal."

He stopped, feeling as if he had come up against a blank wall. Elizabeth of Chadres was staring at him in total incomprehension. If he had discovered a strange new natural law wherein water dripped upward from a tap, he could have experienced no greater sensation of other-worldliness. Elizabeth was different. She had lived and been bred under an ideology that was completely alien. There were imbedded in her brain thoughts and redundancies which were comparable only to the untruths infesting the minds of men and women and children who lived under the Hitlerian regime. She was trying to understand but could not.

Killiard felt sick.

"Skip it!" he snapped. "How about showing me how this boat runs?"

She seemed relieved to forget the subject. Anyway, at that moment, the shafts of sunlight appearing through the ports suddenly disappeared. She suddenly clapped her hands, with the excitement of a child.

"We are underway again." She laughed at him and started off briskly. "We'll go up to the control room," she told him.

They had to pass through a narrow tunnel to the other side of the ship. Killiard walked so close her arm scraped his; and suddenly her step lagged. In the gloom, she turned her attractive face toward him, and stopped. Her lips were parted with a tantalizing smile. She looked at him sidewise out of laughing eyes. Killiard lost his breath and his pulse crescendoed hotly.

He fought the battle of his life, and almost lost.

"Elizabeth," he said huskily. Then he turned abruptly and pushed on through to the starboard deck.

Philippe de Paus at that moment came loping down a ramp. He stopped stock still, and his hands went to his hips. His eyes impassively switched from Steve Killiard to Elizabeth, and then back.

"You!" he snapped at Killiard. "The ship materializes in five minutes inside a London silk warehouse—English-dominant. Get below to the port lading hatch, and report to Pierre d'Anze."

HE CURTLY gave Killiard his directions. Before he left, the American turned around, his eyes narrowing on Elizabeth. She was smiling faintly, as if she had scored a triumph. . . .

The next half hour was a mad scramble to Steve Killiard, ending in disaster. He reported to Pierre d'Anze, along with a dozen other brawny members of the crew who were to act as loaders. They stood in a line in front of a high, broad metal gangway. Suddenly a high,

shrill whistle sounded through the ship. Pierre d'Anze tightened his grip on a chain that would release the gangway. Killiard heard sounds and yells coming from the ship, and then, from outside, the sound of running feet. Came a hissing concussion. And then a ragged barking volley of sound. A bell clanged wildly.

At the signal, d'Anze pulled the chain down viciously. The gangway fell with a tremendous clattering, flooding the waiting loaders with light. The foremost pirate darted through the opening, paused to get his bearings, and then waved the rest after him.

Killiard followed, running across a black hard surface of a peaked warehouse. Stacked against the wall were bales of silk, tightly bound with wire. He did not have much time to notice what was going on, but he saw that twenty or thirty pirates were lined up at each end of the cylindrical ship, weapons in both hands. Red-coated, primly uniformed soldiers were darting through the entrances to the warehouse, fighting as they came. Some went down, but so did some of the pirates.

"Combattez!"

That was Simon's wild, roaring voice, but Steve Killiard could not see him. Pierre d'Anze at that moment grabbed the American pilot, snarled at him, and pushed him toward a rolling bale of silk. Three of the pirates had clambered to the top of the stack, and were throwing the bales off as fast as they could upend them.

Steve Killiard stooped, heaved a hundred and fifty pounds of silk to his back, and hurried back to the ship. He entered up the gangway, turned left into the huge hatch. Somebody grabbed the bale from him, and threw it on top of a stack that was swiftly growing.

Killiard turned and went back for another load.

He was too busy to do much thinking about anything else except his job. But as the minutes flew by, he saw that the pirates were getting the worst of it. Simon's bawling voice came. But red-coated, English dominant soldiers came flooding through the door. Pirate wounded were crawling back to the ship.

On the breasts of the red-coated soldiers, Killiard briefly saw tiny little glowing tubes encased in some transparent substance. He had been wondering why Simon did not use the force-field which had wrecked the Jap ship that was gunning for him. Possibly that glowing mechanism neutralized the field, if there were any. A force-field could not have kept the resisters out.

Bales of silk were now scattered lumpily over the floor, only two and three deep. He was cut off from sight of the ship. As he stooped for another bale, he realized it would be the last, when he heard Simon's bawling, vibrating voice.

"Retournez!" shouted the pirate leader. "Back to the ship. Retreat! The dogs were ready for us."

There were sudden running sounds. Killiard was just heaving the bale to his back. Now, with a curse, he dropped it. He was alone. He did not want to be left behind—not with del Azanto still captive.

He started around the bales, when he heard padding feet. Suddenly he was face to face with de Paus. A trickle of blood was running down the de Paus' face. When he saw Killiard, he stopped, his legs braced, a grim, satisfied expression touching his malevolent dark eyes.

He was holding his five-barreled weapon in his hand. His thumb touched something. The barrels revolved with a clacking sound, until one with an oblate lens shining from the end was on top. De Paus centered it on Steve Killiard.

"You are too friendly with Elizabeth, monsieur," he stated.

Killiard blinked. He had a feeling of disaster.

"I hardly know the gal," he said carefully, but with an appropriate amount of sarcasm.

He could see the menace growing in de Paus' expression. Now, for the first time, he had an opportunity to study the man more thoroughly. His first impression had been one of slimness, almost an

effeminate face and carriage. That impression was knocked out cold.

THIN though de Paus' face was, there was a battle-ship determination and nervous strength in the angle of his jaw. His muscles bulged up against his clothing. His chest swelled. Killiard saw no indication of conscience in the merciless set of firm lips.

"Don't be a fool," said de Paus. "You are already in love with her." Then he pressed the trigger.

Killiard never knew what hit him. His muscles bunched up and he fell, without a sensation in his body. Yet his brain still remained alert and active.

"Helvina will take care of you properly," said de Paus. Then Killiard heard his running footsteps, and the American was left alone.

He refused to believe what had happened to him for that first moment. Then curses scalded through his brain. He struggled mightily, or tried to struggle; and tried to shout. In vain. He gave up after a moment. Then the first trace of horror touched him. He was paralyzed, completely without control over the smallest of his muscles. Perhaps the condition was permanent.

He sank into an apathy of utter despair as the minutes passed. That she-devil Elizabeth. She had deliberately baited him.

Suddenly he heard approaching footsteps. They stopped. Then a man's voice echoed through the warehouse.

"Come, quick! By heavens, here's one of the pirates."

Excited men gathered around him, rolling him over. He felt nothing until they moved his eyelids up. He saw a faint, foggy blur.

"Paralyzed." It was the first man speaking again. He burst into a high, triumphant laugh. "Now this is a prize, men. The first Frenchie we've captured in five years. By heavens, our Helvina will be pleased to see this find. Up with him, now—there, easy does it. Take this hunk of meat out to one of the ground cars." The man laughed again, high, falsetto.

Fuming inwardly, Killiard was handled like a hunk of meat. There was the motion of walking, then of riding in a car during the next fifteen minutes. The motor of the car stopped its smooth whining, and Killiard was lifted out. More motion. An elevator, a corridor, and an opening door. Somebody dropped him and rolled him over like a huge ball and laughed gleefully.

A somber, haughty voice spoke.

"Here, you men—get out. I'll take care of the rascal myself."

The soldiers left. Hesitant footsteps approached Steve Killiard. The man stooped over him, felt in the pockets of his clothing. Of course, they were empty. Finally, after a long moment, the man walked away.

He returned shortly. Killiard heard a brittle, questioning woman's voice.

"They found him in a raided warehouse? But who paralysed him?"

"No one knows. He was simply lying there."

"All right, Peter." The voices neared. "Remove his paralysis, but keep your gun on him. If he knows anything about the French spies infesting London, I'll wring it out of him by torture, if necessary." The woman laughed unpleasantly.

The muscles of Steve Killiard's body suddenly gave way like coil springs which have been stretched to full length. The sensation was sickening. He felt as if his stomach were going to bubble over. He lay panting on his side, clammy perspiration oozing from his skin. He rolled over on his back, weakly. His eyes seemed glued down, or incredibly weighted—with dead men's pennies, he thought; at that, he had been as near actual death as he had ever come.

He finally forced his eyes open, but vision was still fogged. He arose to his feet, too, and stood weaving.

"Steady," the man's voice snapped out. "You may sit down, if you choose."

Steve Killiard did not choose. He preferred to face whatever it was he had to face standing. He turned his clearing eyes toward the man who had spoken. The foggy pieces of the picture

clarified until he had his full sight.

The man who held the gun on him was nondescript with pale eyes, pale skin, washed-out hair, drooping shoulders. The woman was different. Her hair was ash-blond, combed back severely and without attempt at ornamentation. She did not need any ornamentation, Killiard thought. The suit she wore must have been a gray wool. It hugged her body faithfully, all the way up to her neck. Indeed, covered half her neck.

Her complexion was pale. Her mouth was the beautifully relaxed selfish one of a little child. Her eyes lived like entities to themselves, dark, flaming, and yet tragic.

Around her hips was a belt on which one of the five-barrelled weapons was holstered.

Killiard stared, fascinated by her compelling, poignant beauty.

She was, of course, Helvina Osternog.

CHAPTER VI

Death for Elizabeth

STEVE KILLIARD looked around the room. It was a ground-floor room, probably a large hall. Plushed covered chairs and divans leaned stiffly against the walls. Faded portraits hung from slightly cobwebbed wall-hooks. A lush, blood-red rug covered the floor, and at either end two narrow staircases led upward and disappeared. Beyond the large, rectangular window were square, plain collonaded buildings constructed on an unimaginative plan. There was an atmosphere of quiet here, not the quiet of a traditional respectableness, but the quiet of an all-pervading fatigue—a racial fatigue.

He brought his glance slowly back to Helvina. Something in her tragic eyes made him wince.

"Tell me what happened to you," commanded Helvina.

Killiard explained to her that Philippe de Paus had paralyzed him in the warehouse, and why.

With evidences of emotion she moistened her lips. Muscles in her pale face tightened.

"Are you in love with that Elizabeth?" she inquired.

"No," said Killiard, but he felt a strange inward pang as he made the denial.

"That is good," said Helvina. She clasped her white, small hands in front of her. "If you had said 'yes,' you would surely have died." She took a few steps toward him.

"You're the first pirate we've captured in five years, you may as well know," she said. "But we captured you at the most opportune time. Simon and his reign of terror will soon be at an end. Yet I am determined to obtain from you certain information concerning the spies he has planted here. If you cooperate, I promise all will go well with you. If not—" She stopped.

Killiard drew a deep breath.

"Look, Miss Osternog—" he supposed that was the correct addressing form "—suppose I lay my cards on the table. There's no use my letting you get in a dither over what you consider a find. I'm no more a pirate than you are. If you want to know my name—Captain Steve Killiard, U.S.A., a perfectly inoccuous, harmless, informationless guy. I was—"

"U.S.A.," murmured Helvina. "I have never heard of such a nation."

The man Helvina had called Peter now spoke.

"He means the United States of America, Miss Osternog."

"I mean the United States Army," said Steve Killiard.

"He means," amended the other, "that he is a captain in the army of a nation called the United States of America. He claims that, rather. The United States never existed in our time-branch. Belongs to a yellow-dominant branch, I believe. They're fighting a world-war at the present moment."

"Thank you, Peter. I remember now." She addressed Steve Killiard again. "You intend to insist that you are no pirate?"

"Yes," said Killiard.

Before she had a chance to give way to the anger that was patently coming to the fore, he launched into a broadly outlined account of his adventures. That she believed him was evident. Her tragic eyes watered as if someone had dealt her a mortal blow.

"I'm sorry," said Killiard uncomfortably. "If there's any way I can—"

"That is all right. A chair, Peter."

She sat down, leaning her head back against the chair, and staring forlornly out the window. Finally she turned her head back and studied him frankly—as a man and not as a prisoner. Her eyes were thoughtful. Steve Killiard flushed a little. She parted her lips in a slow smile.

"What are your plans now, Captain Killiard?"

Plans? The thought staggered the American. After being shunted around in every conceivable direction, she was telling him that he was free to choose his own course.

He was quite wrong about that.

Helvina's smile became mocking.

"Or perhaps," she amended, "I had best suggest your plans to you myself."

"What do you mean?"

She met his glance calmly. Her eyes flickered, and seemed to undergo a transformation. They became cold.

"You are still my prisoner, Captain Killiard."

KILLIARD started forward a step. "Well, of all the—" he began hotly.

She raised a white, limp hand. "Please hear me out. I am in a position to bargain with you. Moreover, I am in a position to point out to you the absurdity of returning to your own time-branch. I remember this yellow-dominant branch from which you originated now." She nodded pertly. "Six months ago I had occasion to hear a report from the last of my spies at Chadres—the man is dead now. His information was not pleasing—to me or to you."

Steve Killiard was mystified. "Why me?"

"The information refers to your time-branch, Captain Killiard. To mine also, of course. Of late, we have managed to beat Simon at his own game. I developed a time-branch ship detector. Scattered here and there at important food and silk depots, the detectors give evidence of a time-branch ship's approach. Simon is having difficulty. So he intends to make one supreme raid on London, loot the city, then turn his attention to another weak—or unsuspecting—time-branch. In this case, if I remember correctly, this U.S.A. of yours."

"We are not exactly weak, Miss Osternog," said Killiard grimly.

"Weak and unsuspecting. You have no defenses against Simon. Furthermore, your country is weakened by an endless war which it has lost. It barely manages to retain its own liberty. With Simon's ships appearing here and there, coming out of nothing, the yellow hordes will overrun you. Simon's strategy is always to attack the weak. He makes peace with the strong." Her eyes brooded, flamed with a startling, savage passion that abruptly disappeared. "As I well know," she added.

Killiard was nettled. "So you consider it useless for me to go back and fight in a war which we'll lose, anyway?"

"Precisely that. But also it would be useless for you to go back when you can accomplish so much more here. You can," went on Helvina coolly, "help me in a certain way to seal the pirates up in their own time-branch with the artificial causal-thrust del Azanto told you about. Help me in a way I will describe to you and you will have your freedom."

She stood up.

"Well?" she demanded.

Steve Killiard put his hands on his hips, half in exasperation, half in humor.

"It may interest you to know, Helvina," he snapped, deliberately dropping the title of respect, "that my intentions all along were to offer you my services."

Her eyes widened in surprise.

"Well, that is wonderful then! You certainly should have told me, Captain!" She was genuinely, warmly delighted. Suddenly she looked at her gold finger-

watch. "I must attend a conference with the Spanish-dominant ambassador, Steve—may I call you Steve?"

Killiard again found himself lost in admiration at her fragile beauty, marvelling at the helpless exterior under which burned a guileful cleverness she could not entirely conceal.

"You may," he said gruffly.

"I will attend my conference then. And Peter—Peter Almond, my confidential secretary, Steve—will take you to your quarters and give you clothing that will keep my people from shooting at you on the streets." She laughed, an excited, bird-like laugh. "And in an hour I will send a man for you and we will take a ride through my city. It will interest you."

Then she moved from the room and was gone.

Killiard turned to find Peter Almond staring at him.

The man's pale lashes dropped, hiding his eyes.

"This way, sir."

Later as Steve Killiard and Helvina rode through the streets of the otherworld London, in a ground car which ran by some obscure chemical combustion, he received an impression of decadence. With it this impression brought sadness and nostalgia.

Picadilly Circus, Big Ben, Westminster Abbey, Trafalgar Square, the Cenotaph, Kensington Gardens, Hampstead Heath, St. Paul's Cathedral—these were gone, no trace remaining.

This was not London; it was merely a city built on the banks of the Thames which had taken that name. He was disheartened by a greatness that had disappeared. For there was no greatness here. There remained only plain streets and buildings, at times running amok with what some artist had conceived to be beauty. But the artist had been tired with an inherited fatigue, as if he had not had the natural ability for originality.

HUGE "wings"—tailless airplanes driven by rear propellers—were overhead.

Ground-cars and public vehicles moved with an orderly precision.

Shops of an infinite variety, displaying rich wares, lined the streets.

The people seemed to be of a pattern. Something had happened to them, inwardly. It was not their evident lack of robustness, nor their uniform smallness of limb and body, but something psychic. They did not overflow with that staunchness of character, that great, boiling determination to conquer which was a mark of the Englishman of Steve's own time-branch. It was as if they had long since passed their peak and were sinking downward without much desire to climb back.

The car left the city and went rolling through a barren heathland.

Helvina's face was a study. "I know what you think of England, Steve. It is true. The people you see now are the descendants of those few members of the human race which remained after the chemical war which swept our time-branch seventy-five years ago. Seventy-five years ago, civilization was destroyed. A million human beings remained. Now we are a hundred million. Perhaps," she said broodingly, "we should have died, for we still live like parasites on the honest toil of our numerous forebears. We are a rich civilization, therefore. But sometimes I think we are no better than Simon. We plunder the dead past."

It was an insight into Helvina's character that flashed briefly like a light and then was turned off. She would never again make such an admission to Killiard.

He settled back against the cushions and smoked one of his few remaining cigarettes. He questioned her while the car rolled through a bright sunny day, over a peaceful countryside that could have belonged to any time-branch. He discovered what he most wanted to know: that event from which Helvina's time-branch obtained its start. The fork was with the English scientist, Sir Isaac Newton.

In Steve Killiard's time-branch, Sir Isaac Newton had discovered the prism. He stopped there.

In Helvina's time-branch, Newton went one step further—the natural, obvious step—and invented the spectroscope also. It was most probable that he should do so. In Steve Killiard's branch, the fact that he had not followed up with an obvious research was a glaring improbability.

In one year, all ninety-two elements were discovered and isolated.

Chemistry made one giant stride forward which changed the whole picture of civilization. In the following thirty years, there was an industrial revolution. Science bloomed. Machinery appeared where human hands had been previously.

In the year 1865 A.D. humanity was ready for a chemical war which swept over the world like a dark blight. The riff-raff of civilization remained. But amongst that riff-raff, science was in the ascendancy. A civilization that was scientific to the ultimate degree painfully started to build itself. But it was not so painful at that. One million people owned the world. They owned the huge destroyed cities—cities which nonetheless yielded steel, wood, jewels, canned food, books, machinery, and even telescopes.

London became the mecca of civilization, slowly growing, both in size and in population. But it grew at the expense of dead cities. Fleets of ships moved across the empty oceans, men worked like ghouls in urban graveyards, and removed materials that dead men had created.

Artisanship disappeared; men softened; and science alone moved upward on a stern, rigid path. Science ruled this pseudo-London, and Helvina Osternog, last of a long line descending directly from Isaac Newton himself, bore the title of Curator of Governmental Laboratories, which made her the equivalent of a queen.

The story was fascinating to Steve Killiard. The end results which he saw around him were repulsive.

HELVINA told it with a faintly terrified expression in her moist, tragic eyes, her child's lips at times quirking with sarcastic, acid utterances, her pale white fingers twining nervously over each other.

"Our blood runs thin. We have tampered eugenically with scientific genius. I myself—" she looked at him with a sick dread, as if he would be horrified by her "—I myself am a scientific genius, Steve. Science is our only strong point. We must have scientific geniuses to keep it going. We breed for them. What do you think of me, Steve?"

Her small hand crept out, almost timidly, and touched Killiard. The touch awoke a powerful compulsion in him, as strong, yet strong in a different way, than his compulsion to kiss Elizabeth. He shook inwardly and was carried away by the childish helplessness that hung over her like an aura. He gripped her cold, white hand, and found no words.

Helvina's tremulous voice came:

"Do you like me, Steve?" she asked.

"Yes," he said. "But—"

"But what, Steve?"

But what indeed? He did not know the answer. But there was an off-beat somewhere in Helvina's character. Something that was not what it should be, if he were to judge by what he saw.

He slowly released her hand.

Her small moist lips quivered. She abruptly turned, her hands clasped in her lap, her face pale, her eyes facing the direction of travel. Killiard saw some obscure hope fade from her expression. He felt like a heel.

After a time she spoke again in a far-away voice.

"Never mind, Steve," she said. "We will talk of other things. Of scientific things. I am doomed forever to science. I will tell you what the Spanish-dominant ambassador told me not long ago. What I fully expected him to tell me. I have long desired the use of the powerful Spanish-dominant fleet so that I might destroy the pirate city of Chadres. The Spanish, being diplomatically and actually at peace with Simon—Simon is afraid of them of course—have not done me this favor."

"What changed them?" asked the American.

"Now that del Azanto is in Simon's hands, events are different," she answered. "Since del Azanto was kidnapped from an English-dominant ship, they say that I must be responsible for his safe return. However, they are inclined to be generous over the matter, and promise that if I deliver del Azanto to them, unharmed, I may use their fleet." She turned toward him. "Do you understand what I am about to ask you, Steve?"

Killiard did.

"You want me to rescue del Azanto," he said.

"Yes." She was suddenly intense, with an intensity which seemed abnormal for the occasion. "Oh, Steve, you can do it. Ostensibly, you are my prisoner. Simon does not know the truth. Well, you can escape. You see? You can go back to Chadres. You can fool Simon some way. Clever as he is, you are as clever—somehow you will make him believe you have returned to join his ranks. Will you do it?"

Killiard sat rock still. The idea of rescuing del Azanto, in the way Helvina suggested, had occurred to him before. The risks involved filled him with a gnawing uneasiness. Yet, he could no more have resisted the impetuous pleading in Helvina's large eyes than he could have stemmed the yellow tidal-push of the river Thames. He nodded in agreement.

"Oh, Steve!" She grasped up his hand, kissed it. "Oh, Steve, I will be so grateful to you." She saw the look in his eyes and dropped his hand, shamefacedly.

"I'll do it, Helvina," he told her. "One thing, though. Is the artificial causal-thrust station ready to throw up the barrier around Simon's time-branch?"

She nodded slowly.

"Why is it necessary to destroy Chadres then? You can seal the pirates up in their own time-branch, and that'll be the end of 'em. Is it necessary?"

"Necessary!"

She underwent a sudden, terrifying transformation. Her body stiffened.

[*Turn page*]

This blade is sure one for the book—
It helps you keep that well-groomed look!
Gives lots more shaves—with ease and speed
Say, Thin Gillette's the one you need!
Gillette
BLADES
4 for 10¢
Produced By The Maker Of The Famous Gillette Blue Blade
Easy Way To Get Even More Shaves With Every Gillette Blade
1. WASH FACE thoroughly with hot water and soap to soften beard and eliminate accumulated grit that dulls shaving edges
2. APPLY LATHER or Brushless Shaving Cream while face is wet. If lather is used, dip your brush in water frequently
3. TWO EDGES double blade life. Marks indicated above identify edges, enabling you to give both equal use and get extra shaves
4. CLEAN BLADE in razor by loosening handle, then rinsing in hot water and shaking. Wiping the blade is likely to damage the edges

She burst the word out with a wild, passionate cry. A gloating, mad maliciousness swept the childish unhappiness from her limpid eyes.

"Necessary!" she repeated. "Is it necessary to eat? Is it necessary to breathe?" Her hands clutched at each other. "It is as necessary that I destroy Chadres. It is as necessary that I totally and completely kill Simon—it is as necessary that I kill that—that Elizabeth—destroy her, body and soul!"

CHAPTER VII

In a Lifeless Branch of Time

HIS horror of that totally unexpected outburst from Helvina remained with Steve Killiard in full force during the three days he remained in London. The rest of the ride was accomplished in silence, while the American sat stunned. And Helvina rode beside him, as if she had forgotten him, her hands rapidly tearing at each other, her breast heaving, a host of cruel thoughts sweeping all the softness from her face. At the House of England, she took her leave of him with a bare word, her expression distant, enigmatic.

Killiard spent, the rest of that day in his quarters, bathing, shaving, eating, thinking, moving in a dream, his mind sluggishly striving to drag itself out of a shock that had literally numbed it. Off-beat in Helvina's character. . . .

The next day, a man appeared, stating that he had been sent by Helvina to show Steve Killiard through the artificial causal-thrust station. Killiard went. The machinery completely filled a domed, heavily-guarded building. Killiard made nothing of it.

He moved through rooms heavy with standard electrical equipment, walked slowly around the heart of the powerful mechanism on the topmost floor. This was a radio tube on a monster scale. It towered over Steve, quiet, immeasurably potent, surrounded by a lesser host of cables, power banks, and smaller tubes. But that huge tube seemed fragile, too fragile. . . . What if someone, a spy, should gain access here?

The next day, in a secret "hangar," he was given the bare essentials of the operation of a time-branch ship. Steve Killiard had to respect Helvina's foresight. An escaped prisoner, one who had previously known nothing of the time-branches, would not be likely to know much about the ships which traveled across the simultaneous lines of probability.

Late on the third day, dressed in his pirate costume, he sat in front of the controls. He had not seen Helvina. She had merely sent him his instructions. He would leave for Chadres at this hour this moment. He would return with del Azanto, and deliver him to Helvina. What he did in the interim, was up to him.

"Steve," said a soft voice.

Steve Killiard whirled. Helvina came slowly toward him down the central tunnel of the tiny, cylindrical ship. She was dressed in sheer black. Her eyes stood out hollowly. Steve rose, his heart beating painfully at the sight of her.

She held out a metallic object, gray-white, six inches square, perhaps three-quarters of an inch in thickness.

He knew she was having difficulty meeting his eyes, as if in her burned a secret need which was evil and which she could not conceal; and still, knowing it was evil, did not want to extinguish.

"There are spies around us, Steve," she said. "I do not know how many. I have taken precautions to make your apparent 'escape' a complete secret. And yet I cannot be sure. What you see here is the receiver for the artificial-causal-thrust vibrations. I am delivering it to you personally. I have told no one. Only in that way can I be sure that this most important part of your project remains a secret."

Steve Killiard took the square of metal. He felt foolish.

"This little thing picks up the vibrations from the artificial causal-thrust machinery—that buildingful of ma-

chinery?" he asked her.

She somberly nodded, searching his eyes.

"Yes. Two machines, a receiver and a transmitter, one working from Simon's time-branch and the other from mine, will cement Simon in. Bury this gadget deeply, Steve. Anywhere. Corrosive forces, weather, nothing, will destroy it. And now goodby. I wish you much success."

She turned, moved toward the open door. Here she turned. She drew herself up almost imperiously, her eyes burning into him across half the length of the ship. What she said was like a command.

"You must try to like me a little more, Steve."

Then she was gone.

Steve Killiard turned slowly back to the control board, settled himself into position, and carefully revolved a dial until the vertical backdrop of the board winked enigmatically with hundreds of tiny little lights, and hundreds of different patterns.

BENEATH his feet, the parallelochron motors commenced to thud. In a bell-jar an instrument which revolved in a visible violet circlé flung itself into high motion. It was composed of two weights hung on the top of the upright shaft. It was merely a time-branch ship detector. If there were a ship within ten "chronals"—a unit of distance—the weights would drop a corresponding amount downward, a meter at the base recording the amount of "chronals" by which the nearby ship was separated.

The hundreds of winking lights settled down into a constant pattern which comprised a "graph" showing the position of this time-branch in regard to others surrounding it. Only a highly advanced technician could read it. It meant nothing to Steve Killiard.

He pressed a button. The door whined softly shut.

A silver plate directly before him lighted up with what looked like a tree. The trunk, of course, was Helvina's English-dominant branch. The upslanting limbs perfectly parallel, were marked at their terminal points with such notations as "Roman-dom.," "Aylian-dom.," "Dead," "Indian-Greek Dom.," "Span.-Dom.," "French-Dom." There were perhaps forty or fifty such. Steve Killiard knew that there were, for the purchase, other plates which would picture the various branches of branches, or those branches which had forked away from any and all explored branches during the past thousand, five thousand, million or billion years.

This was the picture of those branches with which this Eng.-dom. branch was in close intercourse.

Branches were broadly identified by the number of "causas"—the units of causal-thrust—exerted between them.

Killiard reached up to the tree, grasped a knob, moved the knob clear down the trunk of the tree which represented this branch, and stopped at that point where the French-dominant limb forked off. He moved the knob up to the edge of the plate, left it there. At the base of the plate, he pushed a button.

At his elbow, a meter started clicking off numbers. It stopped. There were 70,000 odd chronals between here and the French branch. There was a causal-thrust of four point three nine. Integrating between a "distance" of 70,000 chronals, and the stated causal-thrust against which the ship had to work its way, the trip would take two and a fraction hours.

Killiard set the geographical-distance indicators for the city of Chadres. The ship would now drift for the stated number of miles through space. Total for the trip would be two hours and twenty minutes.

There are but three real dimensions in the universe: spacial-distance, parallelochronic-distance, and durational-distance. Killiard would move through all three.

He threw the motors into gear and to wordly eyes his time-branch ship simply disappeared.

Steve Killiard, after that first hour,

moved restlessly through the little ship, hands sunk deep in his pockets, a brooding, somber fear narrowing his eyes. A terrific urgency had grown in him. The hated, phrase "yellow-dominant" was uppermost in his thoughts now, and had been, these last three days. Back in his own time-branch—how many chronals distant he did not know—his countrymen had lost. They were still fighting? No matter for they had lost—lost! Steve Killiard beat his clenched fist against the wall, and cursed with an all-enveloping despair. What could he do?

What could he do! Well, he was doing it, by heaven. But what if he failed? What if he failed to play his part to perfection? What if Simon saw through his pitiful attempt at duplicity? He would not return with del Azanto; del Azanto in turn would not fulfil his half of the bargain and turn over the transmaterio, that astounding device for penetrating solid matter which Steve Killiard was more and more coming to believe was the one weapon which could turn back the yellow menace sweeping over civilization.

More, if he failed, there was Simon. Steve ground his teeth. Simon, who preyed on the weak, and would begin his activities against the valiantly fighting, beleaguered United Nations.

STEVE KILLIARD went back and sat down, shaking and sweating with a numb terror. There rested on his shoulders more responsibility than he cared to shoulder.

To plague him still further, the arrogant, taunting, infinitely lovely face of Elizabeth of Chadres rose in his thoughts. And beside her, with her piquant child-selfish lips and staring, tragic eyes, Helvina Osternog of London. . . .

"My good gosh!"

He buried his face in his hands, his nerves quivering. There were other problems, problems whose nature he did not even know. Far below his conscious mind, they tortured his being.

Why did Helvina want to destroy Chadres? Why did she want to kill Simon? Why did she want to kill Elizabeth?

He brought his head up, his face gray. Why, by heaven, he was getting hysterical. Why? Fear? Fear of what? He thought he had it suddenly. He was suspended between things. He was outside the world. There was nothing around. He was traveling in a direction which had no distance to it—not actual distance. He was afraid of that. Suddenly he was sure of it. Suddenly he knew what to do about it. He arose with a jerk, walked toward the nearest direct-vision port. It was a strange sight. He did not want to look outside.

But he did.

And his nerves quieted instantly. There was nothing but a gray swirling fog. What it was, where he was, no longer seemed to trouble him.

He felt foolish.

"The hair of the dog that bit me," he thought in some astonishment.

At that moment, a tiny, tinkling gong rang. He turned back to the control board. It was an audible warning. The visible warning was the action of the time-branch ship detector. The tiny bobbins were still whirling, but they were drooping, losing their violet fire. The meter at the instrument's base recorded the numeral "four."

A time-branch ship was four chronals' distant!

And while he watched it dropped to three.

Hair prickled on his scalp. A subtle, yet sure knowledge made him act instantly.

From a distance of three chronals, certain weapons could act to shatter him and the ship to pulp.

He twisted the knob on the "tree" with a savage motion, destroying his former course. He set to revolving a cylinder which blazed for a moment with intertwining circles. The circles suddenly rushed together, formed a broad thick band, beside which a numeral suddenly glowed—a period followed by fifteen different numbers.

The ship was motionless, hovering "over" a time-branch which had forked

away from the English-dominant branch millions of years ago.

Madly, Killiard grabbed up a thousand-paged book, leafed through it until he found that number. He read, skipping details.

"Lifeless—waterless—seven planets in solar system—dying Sun. For landing purposes set pointer of statochron at eight point eight eight-nine-o-nine."

Killiard dropped the book and made a flying leap for the statochron pointer. With trembling fingers he set it and pressed the button that activated its mechanism. Immediately, the idling parallelochron motors died, for they ceased automatically as the statochron accomplished the ship's landing.

Killiard darted for the door, swung it open with the hand-hatch, and jumped from the ship. He stood petrified with horror for a moment on the edge of a cliff which dropped away into a sheer, depthless valley filled with rolling, blood-red mist—blood-red because a Sun of that color hovered on the outer horizon.

On the far side of the ship was a jumbled mass of bare, Archean rock. Killiard edged around the ship and threw himself to his stomach, heart beating madly. If his pursuer, if pursuer he was, landed, Killiard would not know the point of his landing.

FIVE minutes passed. He dared not move. He had one comfort. He was adequately armed with one of the universally used penta-guns. He had the heavy weapon set and ready to fire a good, solid slug of lead. That barrel was good near or far, while the paralyzing, disintegrating, burning, and freezing vibrations emitted by the other barrels, respectively, were good only up to short distances.

He heard a step on the lifeless rock—a scraping, cautious sound that came from the opposite side of the ship. Killiard held his breath until he was dizzy. A man, whoever he was, continued to approach.

Killiard brought his knees up to his chin and unlaced his boots. In stocking feet, he quietly climbed to the top of the ship and wriggled along the round surface until he was looking over the other side. His breath sucked in in amazement. He recognized this man. No wonder Helvina had had spy-trouble!

Killiard's eyes twinkled with grim humor.

He cleared his throat.

"Looking for somebody?" he inquired.

The man's head jerked up. His pale eyes bulged. He gave birth to a strangled scream, started to raise his weapon, his intention obvious. Killiard's weapon spoke with a single, sharp retort. The man numbly looked at his empty hand.

"Up with 'em!" Steve Killiard snapped. "That'll be enough from you, Mr. Peter Almond."

CHAPTER VIII

"Simon Is Dying"

CRINGING backward toward the edge of the cliff which dropped away behind him, Helvina Osternog's private secretary whimpered in fear as Steve Killiard stepped lightly toward him.

"What are you going to do with me?"

"Not kill you, if that's what you expect, or deserve. You've been spying on Helvina—how long?"

The man licked his lips nervously. "Five years."

"For Simon?"

"Yes."

"And as Helvina's confidential secretary." Steve Killiard clicked his lips in respect. "You put over a good one, pal. No wonder Simon knows where to put his ships down, right wherever you tell him, for the biggest haul. What's your real name?"

"Pierre Almonde, sir."

Killiard grinned tightly.

"So you knew I was going to Chadres as a spy and followed me up to polish me off before I could do any damage. Okay, Almonde. You're going to do me a favor. When you talk to Simon, what

do you call him?"

Almonde blinked. "Why, Simon. Everybody calls him Simon."

"Okay. Inside the ship, Mr. Almonde."

Killiard sat him down at the little galley table and gave him a pencil and paper.

"Now," he commanded, wiggling the gun commandingly, "write as I dictate. *Cher Simon—*"

Almonde scribbled hurriedly, signed his last name in a scrawl. It was only after he finished that he realized the content of the brief note.

"But *monsieur!*" He looked astonished. "You are actually in love with Elizabeth?"

"That's what the note says, doesn't it?"

Almonde looked at him in fascination.

"You are a brave man, monsieur. De Paus will kill you whether or not you gain Simon's confidence."

"I'll take my chances," Steve said grimly. He took the note, read it over and nodded in satisfaction. He stuffed it in a pocket. He was suddenly filled with gay, light-hearted humor.

"I'm leaving you here in this time-branch, Almonde," he said cheerfully. "You'll have food enough and water enough from your ship's supplies for a few months, I suppose. At that time, I'll see that somebody picks you up. In the meantime—"

The barrels of Killiard's penta-gun clacked around. Almonde did not have time to protest. He rolled to the floor in a tight bundle as the paralyzing ray struck him. Killiard left him there, loped across intervening space along the edge of the cliff, and entered Almonde's time-branch ship. His weapon clacked again, the distintegrating ray sweeping across and again across the ship's control mechanism, biting down into the floor toward the parallelochron motors, leaving the nose of the ship in molten ruin.

Gaily, Steve inspected the ship's supply lockers. He nodded. Enough food, enough water. The job was done, and a problem that had perplexed and even terrified him, was solved.

A few minutes later, Killiard was carrying Almonde from his ship. He dumped him on the ground, reversed the paralyzing ray, and left Almonde to recover as best he might.

He stood in the door of the ship for a last moment, studying the sinking, dying sun, the rolling mist, the vast humped mountains. His breath caught in his throat. He felt a moment of profound despair, an awful futility. The thousands of miles stretched away, and there was no water—and no life—in all that weary distance. A dead, macabre, hopeless world, marooned in an out-of-the-way time-branch where, by some chance, not even the merest uni-cellular organism had ever evolved. . . .

He entered, put the ship back on its course; and an hour later materialized within the placid, ivy-covered walls of the pirate city of Chadres.

He arose slowly, his face strained, his head down in thought as he walked toward the ship's door. He stood there for a moment, not liking the clammy sense of danger that gripped him. Fine beads of perspiration pearled his forehead. He drew his penta-gun reluctantly, and with his left hand threw the door's hand-catch, and with a sudden motion slid it open.

NIGHT brooded over Chadres. Squat, fancifully constructed buildings marched away down a quiet, dark street. Far on the distance, a glow hovered—mutely testifying that Chadres was a far-flung city, with its suburbs, its business sections, it recreation centers.

Killiard stood with feet braced, his penta-gun dangling loosely, a grim smile etching his rocky face. He looked up and down the streets. Then he stepped from the ship.

No sound.

Killiard spoke aloud conversationally.

"All right, monsieurs," he said. "I'm waiting."

A full minute passed. He forced him-

self to stand at ease. Then, as if their bluff was no longer worth it, men moved from the shadows of buildings, walked quietly toward him, straining their eyes to get a better look. They grouped around him at a respectable distance. One man moved forward, his penta-gun trained on Killiard.

"Drop your weapon, monsieur," said the man.

Killiard dropped it.

"Who are you?" asked the man. Not a pirate, I'll wager, with an English-dominant ship."

"Are you asking me or telling me?" answered Killiard sarcastically. "I'm a pirate, sir, in Simon's employ. Captain Steve Killiard, sir, recently escaped from the English."

The men closed in, surveying him curiously. The leader spoke again, after a moment.

"You have a strange accent, friend," he said. "However, I seem to have heard your name, and so we'll make no hasty decisions. We'll see what Philippe de Paus has to say about you."

"De Paus?" The name burst from Killiard's lips and his jaw fell.

"Good grief," he ejaculated, "I'm a dead man if you take me before him. I want to see Simon—Simon, do you hear?"

The leader jerked his penta-gun, his expression indifferent.

"De Paus administers the affairs of Chadres these days, monsieur. Simon is dying." Then he thrust the amazed Killiard forward into a waiting ground car.

Simon dying? Killiard sat in stunned silence while the ground car rolled smoothly down quiet, brooding streets which had once echoed with stirring events in bygone centuries. Simon dying! It seemed incredible. Cruel, heartless though Simon might be, there was a magnificence about the man that approached greatness. The thought of all that boundless energy, that boiling, volcanic fury silent in death seemed beyond belief.

The ground car rolled to a leisurely stop before Killiard had time to question his captor concerning Simon; before, indeed, he had time to realize what Simon's incipient death meant to him personally. From Simon, he might have expected a comparatively gentle treatment. From de Paus? Growing fear chilled Killiard as he was led up a block-long tier of granite stairs, toward a building constructed on a grand scale, Ionic columns supporting a massive dome. From left and right, the heavy incense of shadowed gardens came.

Steve Killiard marched ahead down a clean echoing corridor on the third level. Men spoke in whispers. Servants who passed, looked at him curiously, then toptoed away. A profound gloom was evident everywhere. Simon was here somewhere, and dying.

The leader of Steve's captors rapped softly on a door decorated lavishly with gold leaf. It opened. Killiard was shoved in, and stopped. A domed room arched over him, as large as a natural cavern, with pendant cathedral chandeliers. Stained glass windows were illuminated subtly, showing lushly colored religious scenes done in the style of Raphael. Above a desk which sat cat-a-cornered at the far corner of the chamber was a life-size religious painting. Here and there about the room were battle-scenes—the martially clad Jeanne d'Arc, at the head of rampaging, victorious armies.

The voice of the pirate who held the gun on Steve Killiard echoed forlornly through the hall.

"A captive to show you, Philippe," he said.

The man who sat a hundred feet away at the desk raised his head.

"Call me Philippe again, fool, and I'll have your tongue."

"We have a captive who claims he escaped the English, sire," the other answered, meekly. But Killiard thought he heard the thin edge of anger under the man's voice.

"Bring him forward."

A MOMENT later Killiard stood in front of the desk, and de Paus had risen, his expression cold. The shadow

of a smile flickered on his cruel lips.

"So you escaped the English, did you, Captain Steve Killiard? Suppose you tell me your—story."

Killiard met de Paus' eyes, making no attempt to conceal his contempt.

"Why should I take the time?" he said. "I was a fool to come back. If I had known that you were in charge of Chadres, I would have gone elsewhere."

De Paus made a casual gesture.

"Leave us alone, men. Get out."

Killiard heard the diminishing footsteps of his captors. The door went shut with a soft padding sound, like a guillotine whih completely, unobtrusively cut away from Killiard all connection with the outside world.

De Paus drew his penta-gun.

"Mercy," he said after a moment of dead silence, "is sometimes one of my attributes, Captain Killiard. I felt somewhat merciful when I left you in the English warehouse. My only desire was to get rid of you. So I left you in the hands of people who are more or less your own kind." His swelling chest rose and fell, slowly. A dark shadow, a fleeting sadness, flickered in his eyes. Then they turned cold again. "It will not be the paralyzing ray this time, monsieur."

He raised the gun. The barrels clacked around audibly.

Steve Killiard felt sick. His own death did not seem important. It was what he was leaving undone that struck the wrong note. He tensed himself for what he considered would be his last movement in life. In this time-branch, anyway. . . .

"Philippe—stop it!"

The voice spoke sharply, pettishly, as a door behind de Paus swung open. Elizabeth stood there, lines of suffering around her lips, her eyes dark pools of reproach. She came forward and snatched the gun from de Paus' hands. She threw it across the room.

"You murderer!" Her cheeks flamed.

De Paus stood as if stunned. Anger came quickly.

"Murder, is it?" he rasped, grasping at her wrist until his knuckles showed white. "You've changed your tune, Elizabeth. At other times, you would have agreed that one cannot murder a man who does not truly exist. I suspect the reason."

"You suspect the reason?" She wrested away from him, panting. "You've accused me of it before. How can you do things like this, when my father lies dying?" A slow tear slid down her cheeks. "Instead of thinking of murder, you should make Simon listen to reason. It's his arm, Philippe. He doesn't have to die. But you—you want him to die!"

She whirled on Killiard, her body torn with grief. The vacant, hollow stare in her eyes suggested hysteria.

"Somebody has to do something!" she cried. "It isn't right. He shouldn't die. Not my father, Steve." She came toward him, searching his eyes, her lips trembling, and clutched his arm. "Can you do something, Steve? Of course, you can't. The doctors couldn't. But it would be so easy—so easy—if only he would—" She stopped, her shoulders heaving like those of a frightened little girl.

De Paus said coldly, standing stiff and straight.

"I tried, Elizabeth," he said. "Don't accuse me of something for which I'm not to blame."

Killiard spoke to her.

"What's the matter with him?" he asked.

"His arm has to come off below the shoulder," said de Paus. "He was burned somewhat in the fight four days ago. Simon wants to keep his arm."

Killiard looked ahead, far ahead. Then he glanced at Elizabeth.

"Take me to see your father," he said. "Perhaps I can help."

He thought he had an idea of how to handle that cauldron of simmering, life-loving energy.

Elizabeth led the way, and de Paus came on behind. They ascended two more levels and went into a white anteroom. Killiard was vaguely astonished when a white-robed nurse signaled for quiet.

"You cannot see him now," she said.

Killiard considered, and then he brushed her aside, flung open the door she guarded and strode toward the bed on which a heavily breathing, pasty-faced man lay.

CHAPTER IX

Where Dinosaurs Still Live

BLOND strands of hair hung down over his forehead in a matted tangle. His head rolled back and forth while the sweat of agony poured from his skin. Beneath the bandages his right arm was swelled to twice its size. The injury had all the symptoms of gangrene.

Killiard stared at Simon until the big man's eyes slowly opened. They came to focus after a long minute and danced madly.

"Captain Steve Killiard, by heaven." He burst into a high-pitched laugh. "We gave you up for lost—how disappointed that spitfire of a daughter of mine looked when she thought you'd skipped. But I didn't think you had skipped. By my father's bones, I didn't. I put the blame on de Paus. What brought you back? Don't you know we'll have to kill you, even if you are in love with Elizabeth?"

Killiard stood at the foot of the bed, gripping the rail.

"Clown," he said.

"What?" Simon sat up in bed.

"I said you were a big, overgrown clown, not fit to command men."

Simon's face contorted. He came to hands and knees. He got off the bed, and came toward Killiard, panting shrilly. His left arm came up and ploughed against Steve Killiard's chin. The American took it. He did not even stagger.

"Clown," he said derisively. "All the strength has gone from your fat carcass. All the strength has dribbled away through your swollen arm, Simon. Your arm rots and drags at you and sends its poisons through your body. Soon it will reach out, that dead arm, and grab and pull you into an early grave. And that'll be the last of Simon of Chadres."

His hand lashed out, struck across Simon's greasily perspiring face with cruel, staggering force. Simon fell back against the bed, his great, shaggy head bowed on his chest, gulping at air in long choking sobs.

Philippe de Paus and Elizabeth of Chadres still stood at the doorway, gripped with a great amazement. Elizabeth's face was white as death. Out of the corner of his eye Killiard saw she held de Paus' arm in a detaining grip.

Simon's head came up, his eyes blurred, bloodshot. Tears of rage were running down his seamed cheeks. He plunged toward Killiard, arms windmilling, breath shrilling from his throat.

"St. Joan!" he groaned. "Let me at him. Heaven give me the strength to strike him down."

He blundered against Killiard who wrenched free, and knocked Simon down. The man rolled over twice, and lay on his back, racked with sobs. He struggled to his elbows. That was as far as he could get. His great mouth opened in a scream.

"Doctors!" His voice quivered the rafters. His left arm rose and pointed shakingly at Steve. "Doctors, saw off this dead arm. Give me the strength—and then I'll murder him!"

He fell back, his eyes bulging, squirmed, and was motionless, his great chest heaving. His eyes closed.

Killiard relaxed as a white-robed medico pushed through the two statuesque figures in the doorway. The doctor stopped stock still.

"Mais oui!" he breathed. "He has given his permission. Another day—" He shot a grateful glance at Killiard and stooped over Simon.

Steve Killiard relaxed, his face pale. He raised his eyes to those of Elizabeth. They were brimming with tears, but her glorious lips were curved in a smile as she came forward to his side.

"Thank you so much, Steve," she whispered.

"Thanks for what?" thought Steve Killiard ten days later in the suite Eliz-

abeth had provided for him. "Thanks for the treachery?"

He stood at the great bay window, looking down at the city streets, one knee on the glass-woven texture of a chair, his knuckles gripped around the back until they shone white. His jaw was clenched so hard the lips were bracketed with little white hollows.

This was a far cry from the Steve Killiard of two weeks ago. Then he had been a bomber pilot, calmly following orders, never stopping to think or realize that the scales of destiny already were tipped against him and his kind.

Other, subtle problems tormented him. He was a virtual prisoner now, unable to leave his suite. But he knew with an intuition that would not be denied, both Simon and Elizabeth looked on him with favor. He had not seen Simon, but he could follow the devious twistings of that peculiar mind enough to guess where he stood. He was in.

HE WAS in, and Helvina was in, and del Azanto was in, but Simon and Elizabeth and Chadres were out. Seventy thousand "chronals" away, Helvina Osternog—"clever, dangerous in her own way"—del Azanto had said—dreamed of the ruin of Chadres, and the deaths of Simon and Elizabeth.

Helvina, with the child-selfish mouth, and the sad, haunted eyes. What went on in her mind? What?

He found himself shivering; but shivering at himself as well, for the monstrous treachery he was compelled to perform.

A footstep sounded beside him.

A pirate guard stood there, hitching up his trousers.

"Elizabeth wants to see you up on the roof, Killiard," the guard grunted amiably. "Come on."

He shuffled away, and Steve Killiard followed, shaking his head and grinning wryly. One of the most amusing and totally alien aspects of this French-dominant civilization was the utter lack of social levels. It was quite natural, however. There was no working class, unless stealing could be called work.

Into the United Free Cities of the World poured unceasing quantities of the necessities of life—food and clothing, spices, medicines, and metals; such luxuries as silks, sweets, and even motor vehicles. For what actual labor was necessary, there were slaves. Even these, Steve Killiard was told, called Simon by his first name. . . .

On the roof of Simon's palace, Elizabeth was waiting impatiently. She took no time to greet him, merely motioned him inside her small time-branch ship. She closed the door, with deft hands worked her controls. A gray mist obscured the ports.

Steve Killiard held his peace for awhile. She turned then and saw the frown on his face. She flung her head fiercely.

"Don't you ever get restless, Steve?" she inquired. "I'm restless. I'm happy, but I like to go away sometimes. I'm taking you to a place of which none but Philippe and myself know. You will like it."

She turned back and applied herself to the statochron. The parallelochronic motors ceased their faint hum.

She rose with energy and flung open the door and motioned to Killiard as she jumped out.

They stood on a plateau overlooking a tumbled, raging ocean. A strong seabreeze, cool and moist, blew. Mountains stretched hazily into the distance behind.

Elizabeth turned and pointed, her flowered scarf blowing out behind her.

"Away over there," she told the American, "are carboniferous swamps. The giant dinosaurs have never died. Man has not come on the scene. Perhaps he never will. We are the only two human beings on this world."

She stopped, an anxious expression in her greenish eyes.

"I've been troubled, Steve, troubled in a way I can hardly explain. That is why I brought you here. Will you tell me more about your civilization?"

She listened intently while Killiard described the antics of certain nations which had sucked the rest of the world

into a conflict that had no precedent in history.

She knitted her hands, her brows drawn down, as if she were faced with a problem she had never encountered before.

"It is a terrible story, Steve," she said. "I feel sorry for your people. And I have never felt sorry for people of another time-branch before. They did not exist for me, and so there was no one to feel sorry for." She laughed nervously, and gave him a quick glance. "I can read between the lines of what you say, too. This Hitler—this Hirohito—you put their civilizations into the same class as my civilization. Pirate civilizations. Do you?"

Killiard was conscious of an iron restraint. Elizabeth was standing too close to him.

"Yes," he said harshly.

She looked hurt, confused.

"It does not seem possible." She touched his arm, searched deeply beneath his gray eyes. "Tell me, Steve, why did you come back here? Did you really escape the English? Did you come back for the reason that father said, that you were in love with me?"

She came closer.

The question struck Steve Killiard with the force of a blow. Suddenly his mind was working with sharp clarity, and he was remembering del Azanto's words.

"There is no escape, not unless you play along with them, deceive them as they would deceive you."

"—As they would deceive you."

WAS Elizabeth deceiving him? Had she truly brought him here because she was restless, and she wanted his company? Or had it been Simon's suggestion? Simon, who wanted Elizabeth to gain Steve Killard's confidence, who wanted to find out why he had come, who wanted to be certain that he had not come as a spy?

Suddenly he was sure of it. His muscles were like iron. He kept his arms at his sides.

"Yes," he said coolly. "I had the bad sense to tell Helvina Osternog that I was in love with you. She threw me into prison without waiting to hear my story. For some reason, Elizabeth, she doesn't like you. And she doesn't like anybody who likes you."

Her hands were suddenly knitted fiercely together. Her voice was strained.

"But why, Steve?" she cried softly. "Why doesn't she like me? What have I done to her that makes her hate me so?"

"I don't know," said Steve Killiard.

Her eyes misted.

"It is unbelievable," she whispered in horror. "I have never even met her. Yet there is something. Something horrible that I do not know. Father will not talk about it with me. Nor will Philippe. Yet they both know. Oh!" She tossed her head in helpless bewilderment. Her shoulders slumped wearily. "It is a problem that has bothered me for much of my life. Perhaps I will never know the answer. But come, Steve."

[*Turn page*]

She seized his arm, and started away. The touch of her fingers was too much for Killiard. He suddenly swept her into his arms, drawing her astonished face close to his. But she made no resistance, and then his lips were on hers.

Her arms crept around his neck. She responded to the emotions that swept over him, and they stood on the edge of the plateau, and Steve Killiard was lost. He released her slowly, his heart drumming.

A vague, tender wonder showed in her glorious eyes. She touched his cheek briefly, gently.

"Steve," she whispered, as if the name were new to her. "Steve."

Suddenly she was like a schoolgirl, with a flush of red on her soft cheeks. She grabbed his hand, her eyes dancing.

"You must see my cabin, Steve."

The cabin was on the next rise, behind a grove of tough, gnarled trees. It was a sturdy cabin, overlooking the ocean, stocked with food, with cooking utensils. There was no electric power.

"Philippe built it for me," she said proudly.

She conducted him around the room, showing her possessions, pictures, books, and things which she had kept since childhood. Killiard was caught and held by a faded portrait on the wall, the picture of a woman, frail, diminutive, sad-eyed.

She caught the direction of his glance.

"My mother, Steve. She's lovely, don't you think, Steve? But I never knew her. She died when I was born." She brooded on that for a moment and then shrugged her shoulders. "Who she was, where she came from I do not know. Father would never tell me. Her death saddened him so much he does not like to talk about her. Steve—" she swung toward him, her cheeks flushed in delight "—would you like me to prepare a meal for you? I will do it in exactly the same manner as a girl of your own time-branch would do it. I have skillets and a gas burner. But we have no refrigerating system, so I have to open cans."

Steve Killiard grinned broadly. "That's exactly the same way a girl of my time-branch would do it," he assured her.

Killiard's mind was singularly unsettled when the time-branch ship started back to Chadres some hours later. He felt hollow inside. There was a sparkle in Elizabeth's eyes, a childish, happy side of her that belied del Azanto's opinion of her. The haughty willfulness that had been hers was gone. Perhaps because he had told her he was in love with her . . . because he had kissed her, and she had responded.

But was he in love with her? He thrust the thought away from him, and closed his eyes in pain. He was here as a spy for Helvina. There must be no other considerations. Next to his skin, at this moment, was the square of metal Helvina had given him, the artificial causal-thrust receiver. He must bury that, as soon as he had the chance, somewhere in the French-dominant branch of time. And then—Del Azanto. He would have to rescue del Azanto, for in him rested not only Simon's downfall, but the fate of Steve Killiard's own civilization. To accomplish those dual purposes, he was ready to go to any lengths.

The time-branch ship landed on the roof from which it had taken off. Elizabeth touched his hand warmly. He wanted to jerk his hand away, but for the life of him he could not. She smiled a slow, secret smile.

"Some day we will go there again," she whispered. Then she walked quickly away.

CHAPTER X

Captain Steve Killiard—Freebooter

AT LAST Simon was well. He was back in his place, managing the affairs of state, minus one arm. Three days after returning with Elizabeth from a branch of time where dinosaurs still thrived, Steve Killiard was called before him.

Killiard walked through into the huge, cathedral-like room, a guard behind him.

Sitting at the desk was Simon. Near him, in attitudes of ease, were Elizabeth and de Paus.

Killiard stood looking down at Simon, his face blank. He was conscious of de Paus' black, dangerous eyes boring into his.

Simon was clenching and unclenching the mighty fingers of his remaining arm. He ran his tawny eyes up and down Steve's body, grinning tightly. Suddenly his great cavern of a mouth opened.

"Well?" he boomed.

"Well what?" Killiard asked flatly.

Simon pounded his fist on the desk.

"Don't sauce your superiors!" he roared excitedly. "Don't antagonize me, Captain Killiard. I still remember the way you batted me around when I was half-unconscious. Was that any way to treat a sick man?"

"It was the only way to treat a sick man who didn't have sense enough to give the word that would cure him."

Simon leaned back so hard he almost lost his balance.

"Hear that? Hear that?" he cried to Elizabeth and de Paus. "Now there's a man I like!"

His moods no sooner came into being than they disappeared. He looked at Steve menacingly.

"Tell me the truth, or by heaven, I'll skin you alive. Out with it, now."

Killiard started from the beginning, taking care to remain uncivil, at times insulting. He told his lie well, never taking his eyes from Simon's. Amazement grew in Simon's eyes.

"So Helvina imprisoned you because you confessed to being in love with my Elizabeth." His thick lips curled in a sneer. For a moment he seemed lost in a memory, a hateful memory, that could not be shared.

"Ah, yes," he whispered softly, "she would. That she-devil would. That crazy she-devil. She hates me, and she hates Elizabeth."

"Father," Elizabeth broke in, startled. "Why should she hate us personally?"

Simon scowled at her.

"Ah," he mumbled, making a savage gesture, "you wouldn't understand." A slow flush of red crept up from his corded neck, and his eyes shifted from Elizabeth. She stared at him in puzzled fashion, and then slowly relaxed.

Simon leaned forward. "What proof have you that Pierre Almonde helped you escape in one of the English ships?" he snapped.

Killiard handed him the carefully guarded note Pierre Almonde had scrawled out.

Simon read it with a scowl, threw it to one side. He looked at Steve through one narrowed eye.

"Now see here," he roared, shaking his fist. "I'm going to believe this story of yours. It tallies. But when Pierre Almonde shows up with his report to me and if he gives you the lie, you'll wish you had stayed in Helvina's land, subject to her tender mercies. You hear me? Remember it. In the meantime, I'm going to put you on a pirate ship."

De Paus came silkily to life.

"Wait a minute, Simon," he snapped angrily. "You can't do this. What if this man is a spy sent by Helvina?"

Simon swung around.

"So?" he said scathingly. "Don't try to dictate my affairs, Phillipe. By the bones of my ancestors, if you'd have had Captain Killiard's brains, you'd have forced me to give my permission to have those white-robed quacks saw my arm off the way he did. Instead, you were willing to let me die. Was it because you wanted Chadres for yourself?"

De Paus stiffened, his eyes blazing, his hand falling to his penta-gun.

Simon emitted a curse and leaped to his feet and snatched the gun from de Paus.

"Name of the name!" he roared. "You're aching to murder me!"

"That's a lie," de Paus said coldly.

Elizabeth walked forward.

"You're b e i n g s i l l y, father," she snappped. "Philippe has always been loyal to you."

THE anger died from Simon's face. He looked dazed.

"I'm not a well man," he mumbled. He handed the gun back to de Paus.

"Sorry, lad," he said thickly. "But if you're jealous of Captain Killiard, don't try to get at him through me. That's between you and him. Guard! Come here! Take this Captain Killiard and see that he gets a berth on Jacques Lobard's free-lancer."

At the door, Steve Killiard turned briefly and caught Elizabeth's glance. Simon had discussed Steve's love of Elizabeth as if it were a commonplace, as if it were something of which he, Simon, was proud. Nor had Elizabeth seemed embarrassed or even impressed. She was looking after him now with a faint, tender smile which momentarily made time stand still. . . .

Thus Steve Killiard became a fighting man under Simon of Chardres. He withheld nothing in order to make the deception complete. As a pirate on one of the cumbersome, lightly armed free-lancing ships—those ships which were used solely to train youngsters in the ranks, and which generally attacked and raided time-branches which knew nothing of the parallel worlds—he fought side by side with other recruits, coldly turning himself into a soulless machine.

He killed, and killed men who did no wrong other than to defend what was their own. A strange, ironic alchemy took place in his mind. These were shadows, these people of other time-branches. They were not real. Elizabeth's philsophy, and that of Simon began to permeate his mind.

Strange and sometimes macabre were the sights and scenes he witnessed. There were an infinity of worlds. Those which man inhabited were less common than those ruled over by intelligent animals. There was the time-branch which was wolfman-dominant. Or were they dogs? A kangaroo-dominant branch. An outlandish elephant-dominant world where cities were massive stone and steel mountains.

Nothing was impossible. Once they landed in an unexplored time-branch, in the middle of a battle scene where armored men flew through the air, their bodies shooting off vari-colored death rays. The horizon was in flame, as if a world were being destroyed. Again, there were Roman, Greek, Chaldean branches, identifiable only by language, for the classic dress and artifacts of these races had evolved through the thousands of years to something else that was "modern."

The Sun was dying.

The Sun was dead.

The Sun was a nova, withering life on Earth.

The Earth swarmed with humans. The human race was decimated. Space travel was a fact. The machine age had not yet arrived.

Nothing was impossible.

Anything that might have been—ever, at any moment, at all times—had happened. As the days, the weeks, fled by, Steve Killiard was enveloped in a nightmarish despair, a maddening futility. One lost attachment to reality altogether after viewing the impossible. One was but another offshoot of chance.

In another time-branch, in millions of time-branches, Steve Killiard had never been born. In millions of other time-branches, there were other Steve Killiard's, with his mind, his thoughts, with his experiences. And some of them who did not have his experiences. Some had pursued different paths. Some, by a chance, were c r i p p l e s. Some, by a chance, were insane. Supreme nightmare! He was one Steve Killiard among many!

Captain Jacques Lobard twirled his stiff, waxed mustache and laughed.

"I went through that myself, Killiard." He nodded wisely. "There's only one way to beat it. Become egocentric. You're the only Steve Killiard that's real. To blazes with those shadows! They don't live."

Captain Jaques Lobard, who walked with a limp, and had been assigned to this free-lancer for that reason, was killed one day. It happened in an insect-dominant branch. While the loaders carried the gold idols into the ship's belly, Killiard stood in the forelines of the ship's crew, his penta-gun blazing away full blast at the advancing insects.

The temple floor was piled with

charred insect carcasses. More came hurtling over the dead, mandibles clacking, their long formic acid guns squirting. These insects were civilized. Evolution had long since taken away their formic acid sacs, but they continued to use the deadly liquid. Also, they had death rays which could be used only at close quarters. Steve Killiard, fighting beside Lobard, saw the pirate's torso suddenly vanish.

KILLIARD stepped into the breach, took over the command with the instincts of a born leader, and mopped up the last of the insect horde. Then the golden idols were loaded into the ship. At the time he had not seen Simon or Elizabeth. Now he received a crisp note from Simon, which performed the dual purpose of commending him for a valorous action in the face of odds, and gave him command of Lobard's freelancer.

Not long after, he was removed from the barracks where he had been living and assigned quarters suiting his new station. This was on the fourth floor of a building given over to that purpose. On a platform outside the window, was his own private autogyro. Opposite, grimly somber, a tarblack building sitting on a weed-grown hill, was a bastille. It had been constructed more than five-hundred years before.

It had a dark, sinister history. In the past, political prisoners had rotted away in its confines. It now harbored vicious criminals. To Killiard that was a laughable fact in a city whose every citizen, judged by the laws of his land, was a law-breaker. But since crime was directed so openly against other time-branches, there were few crimes in Chadres which merited a man's being thrown into jail. Therefore, this was the only jail in Chadres. And therefore Alonzo del Azanto was a prisoner there.

Killiard had not relied on deduction alone to come to this conclusion. These last three weeks of fighting had left him with little time to think or make plans. But by casual questions, by keeping his ears open, he had located del Azanto's cell in the prison. He also knew that Simon had personally directed the torture calculated to make del Azanto reveal the plans for a vibration or machine which would neutralize the artificial casual-thrust vibrations he and Helvina had fabricated.

The torture was given periodically, until del Azanto fainted.

The concensus among the pirates to whom Steve talked was that del Azanto would either capitulate soon, or go mad —or die.

At night, Steve Killiard looked across at the bastille, occupied with his own grim thoughts. On his person, never out of touch with his own skin, was the causal-thrust receiver. He had not yet found an opportunity to bury that in what he considered a proper place. Truth to tell, he had a certain aversion to it.

DURING these passing weeks, he had been able to consider Helvina Osternog with perspective. The complete picture was not pleasant. Del Azanto, who knew her as well as any, regarded her as clever and dangerous. Helvina of the tragic eyes! Or was that a pose? And Simon, whose hatred of her, whose fear of her, went beyond the demands of a normal enmity, called her crazy—a crazy she-devil. Crazy? Well, she herself had admitted that her immediate ancestors were closely inbred, to preserve the scientific strain. Now Killiard himself was beginning to distrust her. A quick sense of alarm was growing in him.

What if del Azanto died before Steve Killiard could rescue him? Helvina's sole reason for withholding the artificial causal-thrust wall around Simon's branch was her fear that Simon might wring from del Azanto a counter causal-thrust. With Azanto dead, she need have no such fears. Perhaps she would set up the causal-thrust, uncaringly trapping Steve Killiard here, along with Simon and his people.

The American frowned. Now, would she do that? She wanted to destroy Chadres, and kill Simon, and kill Elizabeth. First she would accomplish her

vengeance. He snapped his fingers irritably. She could not destroy Chadres, not without the Spanish fleet. And she would not have the use of the Spanish fleet unless del Azanto were returned to the Spanish-dominant branch.

So, since she could not destroy Chadres, she would do the next best thing and set up the causal-wall, if she were truly treacherous.

Helvina treacherous? Somehow, Steve Killiard winced.

He grimly looked across toward that somber bastille. Events pressed. Del Azanto would have to be rescued, and soon. Even if Steve Killiard had to take a long chance to accomplish the rescue.

CHAPTER XI

In the Dungeon Cell

ONE week later, Steve Killiard's plans were laid, perfect in every detail. But somehow, without knowing the reason why, he found himself putting off the moment of action, although he knew it was imperative to act at once.

During that week, he had pursued his activities on the free-lancer. The ship had landed, had made a brief foraging, once in a civilization which the "tree" told him was Martian-dominant. In a faraway time-branch, the Martians had landed on earth.

On another trip he brought back to the French-dominant branch two haughty black men from a negro-dominant branch. Steve Killiard himself escorted them to the bastille, though not without some trepidation.

The keeper was a fat, lazy creature who agreed to confine the two slaves in a cell until Killiard should notify Simon of their presence. The American kept his eyes open, noted the floor plan of the jail, as he followed the keeper down dank, hard-packed earth corridors, cells on either side.

In one of those cells he saw del Azanto. His heart gave a great bound of relief as he saw the Spaniard, erect, unbeaten, standing against the iron door.

"Cap—" Azanto started to say. Then his lips clamped, the breath sucking through his teeth as if he could recall the involuntary astonishment of his greeting. But excitement gleamed in his eyes.

Killiard walked by as if he had not seen del Azanto.

There were in the jail, besides the staff of cooks, in the kitchen at the rear, three men—the keeper, the guard to the upper cell block, and the guard to the lower. The keeper alone occupied his gloomy office on the ground floor; and carried the keys.

Killiard went back to his quarters. It could be done, and with ease. He had his own autogyro, and his own time-branch ship, on the roof of the building. And yet—

And yet, for the three days following his decision to make the break, he found himself in an agony of inaction, fighting himself and losing. Something was keeping him back. What? He could not face the thought, even to the point of admitting it to himself.

He returned late one morning, his every nerve quivering, his muscles like lead, a trickle of blood running from his jaw. For two hours he had stood at the head of his men, fighting off attack from a bunch of super-scientific Romans. The foray had not been without casualties. All Steve Killiard wanted to do now was to throw himself on his couch and sleep for a week. The signal gong of his television set sounded softly. Killiard crossed toward the set with drugged step, fighting his weariness. He cut in the power.

The plate swirled for a moment with shadows which then smoothed out to reveal Elizabeth of Chadres' cool, full-lipped smile.

"Elizabeth," Killiard said blankly. This was the first time he had seen her in over a month. A dull, painful pulse beat in his temple as his eyes encompassed the trim, wholesome lines of the girl.

She smiled. "Steve," she said softly. She frowned then, in alarm, as she saw

the blood on his face. "Oh, Steve, you're hurt?"

"A scratch," Steve said. "I'm all right."

"You need rest," she said gravely. "Father has been pleased with your work, Steve. You may be given command of a full-fledged pirate ship soon." She smiled brilliantly. "I've been talking with him about it."

"Thanks," Killiard said curtly. His nerves were thrumming. "Did you want to see me about something, Elizabeth?"

Her face fell. She looked unhappy.

"Yes," she admitted. "You may accompany me to my cabin again, Steve." She pursed her lips, thoughtfully. She added, quite as if he had nothing to say about it, "Please meet me on the roof of my father's palace, Steve. In an hour. My ship is ready."

"Perhaps it's my place to ask you?" Killiard suggested.

"What?" She blinked at him.

"I'll be there, Elizabeth," he said.

No sooner had her face faded, than the realization of what he must now do struck him like a blow. He felt faint. His plans were changed somewhat, and they included Elizabeth. For a moment he paced back and forth across the suite, picking at his nails in an agony of indecision. Of course! The reason he had not put the plan into operation before was because of Elizabeth.

HE COULD not let her stay here, to die when Simon perished at the hands of Helvina. He beat one clenched hand into the palm of the other, cursing himself for a weakling, for a soft-hearted sap. The chances against getting away from Chadres with del Azanto and Elizabeth were mountainous.

He stood rock-still, his face hardened. With a blistering curse that was directed against himself, he grabbed up his pentagun, checked the barrels, slung his black officer's cape over his shoulders, heaved himself to the autogyro platform. Moments later, the craft's motors purred softly, and the broad vanes above its wings beat at the air. It moved from the platform, hovered over the street, and settled.

In an hour!

That was the time limit inadvertently given him by Elizabeth.

He halted the autogyro at the base of the hill on which the bastille stood. Stiff-legged, his every sense alert, his heart thumping against his ribs, he marched up the narrow, weed-grown stairs and pushed open the weather-stiffened doors.

He crept into the keeper's gloomy office. That individual was not present. Steve Killiard turned left, walking quietly until he came to the stairs. Halfway down, he saw the dark shadow of the keeper coming up. The man took one look at him and snatched for the weapon at his waist with a speed that belied his bulk. Killiard shot it out with him on even terms. The fat man doubled up in paralysis, and Steve Killiard loped down the stairs after the tumbling man. He lifted him, calling on every ounce of his fading energy, and placed the man on a broad ledge above the stairs, out of sight. He took a quick look around, then darted down again. He now had the keeper's keys.

At the locked door to the lower cell block the guard halted a moment in astonishment before he advanced toward Steve, menacingly. He had his gun out.

"Don't be a fool, man," Steve Killiard growled impatiently. He jangled the keys. "How would I get these if your master hadn't given them to me? Step aside. I'd have a word with one of the prisoners."

"You'll have a word with a coffin if you don't go back the way you came," the guard snapped. He advanced toward Steve. "Go on."

Killiard stood with his hands on his hips in apparent exasperation. When the guard came close enough, he shot out his balled fist and literally knocked the man's weapon from his grasp. He stepped in close, grappled. The man panted shrilly. Killiard brought his knee sharply upward in a *savate*. The man doubled up, groaning with pain. Killiard bathed him in the invisible paralyzing rays, grabbed him by one leg and

dragged him into the corner.

A moment later he swung open the lower door and loped down the musty corridor, paying no attention to occasional prisoners who spoke to him, derisively or pleadingly. He found del Azanto's cell, turned the key, and went inside.

Del Azanto was stretched out on the floor, a single frayed blanket protecting him from damp earth.

Steve stooped over him.

"Azanto!" he said.

He could see the Spaniard grow tense. Then Azanto rolled over.

"Captain Steve!" the Spaniard's voice blasted out. Steve Killiard fiercely clapped a hand over his mouth.

"Quiet, you fool."

Del Azanto relaxed, his eyes beginning to glitter with excitement. Killiard searched his face, knew a moment of revulsion.

"Good Heavens, man, what've they been doing to you?" he asked.

Del Azanto touched at the deep burns on his transformed face. He grinned a ghastly grin. He said nothing. Steve Killiard felt a wave of pity.

"All right," he said shortly. "No questions. We have to work fast. Here. Take this. Dig."

He handed del Azanto a jeweled knife, part of the ornamentation of his officer's uniform. Killiard himself drew his penta-gun, chopped at the cold damp clay with the butt, using his hands to claw the loosened earth away.

He watched del Azanto's feeble efforts sharply. The man was too weak to do much good. Steve Killiard took the knife himself, and worked like mad. Del Azanto's thinned hands drew the dirt away from the cavity. At the end of ten minutes, they had a respectable hole a foot deep.

KILLIARD took the square of metal from underneath his belt, glanced significantly at the Spaniard.

"The receiver?" Azanto gasped.

"The receiver. We're burying it here. As good a place as any if we pack it down tight again. In with the dirt."

In a few minutes, his boots were stamping the earth flat. Steve swooped down, grabbed up a wad of left over clay, wadded it into a ball, and looked around for some place to dispose of it.

From the direction of the cell door, then, a narrow beam of light stabbed, falling blindingly on Steve's face. He gasped, whirled.

"Remain motionless, Captain Steve Killiard," said a cold, furious voice. "By the graves of our fathers, what have I done to deserve this treachery?"

Reluctantly Steve Killiard's hands went up as his heart seemed to chill in his breast.

Simon advanced into the cell, his thick lips working with restrained fury. The penta-gun in his left hand was literally shaking under his all-consuming passion.

"Treachery!" he gasped lividly. "Oh, by Heaven, Captain Steve Killiard, you've ruined my faith in human nature. You fooled me—took advantage of a sick, helpless man to practice your foul deceit." He choked. The flashlight, held under his left arm, danced crazily about the cell. Simon's face was ashen-white, as if he had been dealt a mortal blow. "To think that I should have believed you. Even when Pierre Almonde warned me of your foul plans."

He stopped, making an effort to control himself.

"Pierre Almonde," he rasped. "You fool! You didn't ruin his ship quite enough. Almonde rigged up a communicator set and warned us just in the nick of time."

"I see," Killiard said bitterly.

"I'm going to blow out your brains, Captain Steve Killiard. By Heaven, I am. Just when you were on the brink of great things, too. You were on the way up and I was going to make you a full-fledged pirate captain. Then I was going to get rid of that traitorous de Paus, marry you off to Elizabeth, and make you my right hand man. Even give you a half-dozen cities or so to crack the whip over. It's your own fault for missing out on that."

Steve Killiard was bitterly amused.

"You estimate me wrong, Simon. Sorry to disappoint you. I don't conceive those things to be of much value. Except Elizabeth," he added thoughtfully.

"Don't be a fool," Simon panted. "You'd never acquire such riches back in your own time-branch."

"There are," Steve Killiard told him, "other kinds of riches."

HE TOOK the only chance that was open to him. A far-fetched chance, at that. His upraised hands were out of the circle of light. He let fly with the cold ball of wet clay, saw it strike Simon's forehead and flatten out. Simon roared, raised his arm convulsively. His flashlight dropped.

Killiard hurled himself squarely into the lividly spouting penta-gun. It must have missed him though, for in the next second, he was tangling with the one-armed pirate leader. He kicked the man back against the wall with savage force. Simon was plastered against the wall as if he were crucified there. When the paralyzing vibrations struck him, he simply doubled up into a tight ball, his head between his legs.

Steve Killiard took one last look at him, turned and blundered into del Azanto. He gripped the thin man's arm.

"We have to get out of here. Come on."

Del Azanto stopped him.

"Wait a minute." His voice was tense. "Simon was not fool enough to come alone. He has men outside—perhaps upstairs!"

Killiard groaned. He looked around helplessly. His lips thinned. Feverishly, he grabbed the keys from del Azanto's cell-door, went to another cell, shook the door fiercely. A big, loose-lipped man came out of the shadows.

"You!" Killiard snapped. "Want to make a break for freedom?"

The man did. So did others. In a few moments, the American had a group of ten men behind him awaiting his orders. He looked them over, his mind a storm of emotions. The plan was shot, of that he was certain.

Elizabeth doubtless knew of his duplicity—or did she? He g r o u n d his teeth. What if she did not? She would be waiting for him. Did he dare to meet her as scheduled, if he actually escaped this death-trap?

Del Azanto was behind Killiard as they started up the lower stairs. Killiard went ahead. Only two of his men were armed, one with Simon's gun, the other with the guard's. But they obtained another gun when the prisoners, passionately intent on retaining their freedom, swarmed over the guard on the second level. And another when Killiard shot it out at point-blank range with a soldier standing at the head of the stairs on the ground floor. Steve Killiard's ray tore through his heart. The man threw up his arms with a gurgle and plunged down.

Killiard waved his arm in a fierce gesture and charged up to ground level. The rest of that desperate battle was chaos, barely remembered. Killiard tore through a huddle of soldiers, his penta-gun blazing. His men rushed past his flank, and by brute force overcame those who remained after that brief surprise assault. Then, with the sight of actual daylight streaming through the outer door, the escaping prisoners went mad with that glimpse of freedom. Three of Killiard's men went down when the soldiers outside the bastille came surging forward, but the other felons swarmed over the soldiers. Killiard darted down the steep stairs, toward the autogyro and came up short as he found himself face to face with a huge, hulking brute of a man. The man raised his penta-gun and fired.

Killiard dropped to the ground, rolled and grabbed the soldier's thick legs, bringing him down with a crash. For a moment it was touch and go. Killiard was on the bottom, his throat encircled by giant fingers, his face turning red. He brought his fist up in a short, fierce jab. The man's expression changed to groggy surprise as he rolled to one side.

Steve Killiard never waited to see the final end of that battle. Whether the

prisoners he had freed ultimately regained their freedom, or were shot down, he would never know. He had done his part for them and they had aided him immeasurably. An even exchange—and the autogyro would only hold two.

Killiard threw del Azanto into the cockpit, tumbled in after him, and the motor roared. Out of the corner of his eye, he saw one soldier on the weed-grown stairs, coolly aiming his penta-gun. Killiard flicked his own gun in line, pressed the trigger almost without aim. The soldier clasped at his chest as if he were bowing to an audience and rolled down the stairs.

The autogyro's engine whirred, and it leaped into the air.

CHAPTER XII

The Lonely Cabin

UNDER hostile rays the tiny ship sagged, as a burst of fire came from below, and sweat stood out on Killiard's forehead. But the vessel continued to rise nevertheless, and Killiard turned it toward the Palace of Chadres. He was exultant now, his pulses thrumming with that mad escape against incredible odds. If Elizabeth knew nothing of Killiard's duplicity, there was a chance that the rest of the plan would go through.

He shot a glance sidewise at del Azanto. The Spaniard was looking down toward the ground, his burned lips stretched in a grin.

Scarcely three minutes later, the swift little craft was circling the roof of the Palace of Chadres. Down there, on an almost deserted roof, Steve Killiard saw a figure waving at him. His heart gave a great bound. Elizabeth!

He landed the craft as close to the time-branch ship as he could get, on that side opposite the stair ramp which led downward into the palace. Elizabeth stood indolently at ease at the open door of her ship. Steve Killiard was out of the autogyro before the motors stopped. He walked quickly toward Elizabeth, his heart hammering. Her eyes casually smiled at him, then drifted over his shoulder as in careless curiosity as to the identity of the other occupant of the plane. Suddenly she stiffened.

Azanto's name burst from her lips in startled amazement.

Killiard reached her, then, just as her hand streaked down to her penta-gun. He grasped her arms, held her rigid, helpless. Her eyes grew slowly hot with baffled rage.

"Steve!" she gasped. "What does this mean?"

Del Azanto came up. Killiard flicked his head toward the ship. "In!" he snapped. "Take over the controls."

Azanto scrambled inside, and Steve Killiard wasted no more time on Elizabeth. He picked her up bodily, thrust her into the interior of the time-branch ship before she could collect her wits, and slid the door shut. At once the parallelochron motors began to pur.

Elizabeth screamed, and fought like a wildcat.

Killiard carried her aft, paying no attention to the blows she rained on his face. He plopped her down on a chair, and stood over her.

She looked at him in horror. Her face was white as death.

"What does this mean, Captain Killiard?" she panted.

"It means," said Killiard, "that I'm kidnapping you."

"Kidnapping me! Why—you—you—beast."

She arose and pressed her face against a port. The ship was already on its way. Steve Killiard stood rock-still as she turned slowly toward him.

"I see," she whispered through bloodless lips. "All that was a pose. You were sent here by Helvina to rescue del Azanto. You didn't love me at all. Now you're taking me back to Helvina so she can kill me. She hates me. I don't know why, but she hates me."

Killiard kept his face expressionless. There was little he could say at this moment. Inwardly, he winced as he saw her aversion of him building in her greenish eyes. Suddenly she clapped

her hands to her face and sobbed. She dropped to a sitting position, her body heaving, racked with tears as if her heart were broken.

Steve took a step toward her, tortured with longing to take her in his arms. He stopped.

"Elizabeth," he said humbly. She did not raise her head.

At that moment del Azanto came padding softly into the room. He looked from Elizabeth to Killiard, his soft eyes puzzled. He seemed uncomfortable.

"We're on our way to London, Captain Killiard."

Killiard nodded and del Azanto pursed his lips. An edge crept into his voice.

"Is it your desire to give Elizabeth into Helvina's hands, Captain Steve?" he inquired. "If such is your bargain, I'll make no attempt to stop you. After all, I have no liking for Simon or Elizabeth. But—"

Killiard sensed something odd in his manner.

"But what?" he prompted sharply. "I made no bargain with Helvina concerning Elizabeth."

Elizabeth lifted her head, her eyes dull.

Killiard kept his eyes on her while he explained his mission in Chadres.

"Helvina intends to destroy Chadres—to kill your father—and to kill you, Elizabeth," he explained. "That's the reason I brought you with us. Why she wants to do all that I don't know—not when she could close your civilization off from other time-branches merely by throwing a switch."

HE TURNED toward Azanto, studying the man's face. An insistent, knowing note crept into his voice. "Out with it, del Azanto," he said softly. "You know, don't you? You know why Helvina hates Elizabeth."

Del Azanto fixed a piercing glance on Elizabeth. His thin, veined hand crept up to tug at his blackly bearded chin.

"Because," he said unexpectedly, "Elizabeth killed Helvina's mother!"

Elizabeth leaped to her feet, open-mouthed, with an expression of horror on her face. Steve Killiard gazed from one to the other in dismay.

Azanto raised his wiry hand. His voice grated.

"It is the truth," he insisted. "At least, it is the truth from Helvina's distorted viewpoint, Captain Killiard."

"Why do you say that?" asked the American.

"Well, the story is not hard to come by as Helvina never made any attempt to cover it up," answered the Spaniard. "Simon knows the story well." He scowled, touching at the deep burns on his Moorish-black face. His scowl did not relent when he met Elizabeth's glance. "You love your father, senorita, but perhaps you will not love him so much when you understand your origin. The story will not be pleasant for you. It will burn your soul even as Simon's torturing brands burned my face—and my back—and my legs."

Elizabeth's eyes were sick with dread. She stared at del Azanto's burns and then made a savage gesture of denial.

"My father would not do that," she said.

Del Azanto burst into an insulting laugh.

"He did it—he and his brutes."

He took a quick, excited turn up and down the cabin. He smashed his fist into his palm, biting at his lip as if trying to control himself. Elizabeth stepped in front of him, her slim white fingers gripping his arm and an unspoken imperious command on her face. Azanto laughed shortly, disagreeably. "You wish to hear the story. Good."

His eyes brooded. He spoke in a monotone. "Twenty-one years ago, senorita, your father's civilization and Helvina's were on friendly terms. Helvina was but seven—old enough to understand and to remember. Her father and mother ruled England then. I knew Helvina's mother, knew her well. Simon was younger, but little different that he is now, a treacherous loud mouth of a cocksure traitor. He was friendly, yes, friendly until his spies were well planted in London. Then he made a sudden raid on England and took Helvina's

mother back to Chadres—kidnapped her, senorita, and married her against her will."

Elizabeth sprang forward, eyes blazing. "You speak lies, monsieur."

"Indeed?" Azanto laughed unpleasantly. He made no attempt to conceal his dislike. He dropped into a chair, plunged his hands into the front pockets of his grimed, ankle-length trousers, and sneered.

"You think to tell me that Simon could not marry another man's wife?" he went on. "And yet, why not? Simon had his own philosophy—a philosophy to which you, yourself, subscribe, which he thought made his act blameless. According to him, there is only one time-branch—that of Simon of Chadres—and that of Elizabeth of Chadres. The others are unreal. Shadows. On such a convenient philosophy have uncounted cruelties been perpetrated. Since no other time-branches existed in actuality, Helvina's mother had not been wed before. Simon made Helvina's mother his wife and his conscience was clear. That she did not want to marry him was not to be considered."

He glanced at Steve Killiard and broke into a genuine grin.

"Our Captain Killiard has in some measure been infected with that philosophy during his stay in Chadres," he added.

Elizabeth spoke in faint tones.

"You make a cruel case against us, monsieur."

Azanto was on his feet, all the hardness gone from his scarred face. He touched Elizabeth's hand gently.

"*Madre de Dios!*" he burst out. "I do not mean to blame you. But—" he spread his hands despairingly "—the facts are plain. Have you yourself not seen them? You of the pirate civilization are cruel and there is no abiding you. We must put an end to such things. Toward that, Helvina and I have been working. Soon—" he made a slashing, impetuous gesture—"your time-branch will be sealed away as if had never existed."

Steve Killiard interrupted him woodenly. "The rest of the story, del Azanto," he said.

DEL AZANTO shrugged, scowling. "It is simple. Simon began to plunder the English-dominant civilization and Helvina's father, leading a raid on Chadres to recover his wife, met death. Scarcely two weeks later, Elizabeth was born to Helvina's mother, and Helvina's mother died."

Elizabeth's hands were clenched and her face was twisted with pain. Through blurred eyes she was looking at Killiard, registering a voiceless despair.

"My father would not do that, would he, Steve?" she asked hopelessly.

Killiard dropped his eyes.

"Del Azanto told you the story," he said. "Credit it or not as you choose. But I know this: I'm not taking you back to London. Helvina has her justifications, Elizabeth. She has lived with that story in her mind all her life. It's been burned into her, like the scars have been burned into del Azanto's face. Chadres has become to her the symbol of everything she hates. She has a compulsion to destroy it, an unreasonable compulsion, maybe, just as she unreasonably accuses you of her mother's death. But the hate is there, hatred of anything connected with you, or Simon. So I'm going to drop you off at your cabin and leave you. There'll be food and water enough until I come back."

Impulsively he took her hands. He wanted to offer her some word of comfort, to erase the blank, piercing pain he read in her eyes but could find nothing to say. She would have to work things out in her own way. She was Helvina Osternog's half-sister. . . .

Ten minutes later, the ship had stopped in that branch where dinosaurs still existed. And two minutes later, Killiard had his face pressed to the port, looking at her as she stood forlornly in the door of her cabin, alone on an uninhabited world. Then she blanked out as the ship once more started on its trip toward the English-dominant branch, some seventy-thousand chronals away.

A few moments after they were shown into Helvina Osternog's suite, a door opened and she came toward them, excitement showing in her face. She met them both warmly. Tears of pity sparkled on her eyelashes as she saw the Spaniard's scars. Impulsively, she clasped his hand.

"Oh, my true friend, what have they done to you?"

Del Azanto briefly explained his experiences.

"They learned nothing," he said simply.

Tears ran down her pale cheek as she touched at his disfigured face.

"Poor man, poor man," she whispered brokenly. "Simon will get his just deserts for this. And you, Steve! It is wonderful that you succeeded."

She turned toward him, dropped her hand to his. A strange, pathetic, helpless timidity showed in her manner. Her finger tips trembled and were cold to Killiard's touch. He winced. It was almost as if Helvina were searching to the depths of his soul, and discovering there what he thought of her.

"Tell me what happened, Steve," she insisted.

Suddenly Killiard felt drugged with weariness. His voice sounded faraway, detached, thin. At the news of Peter Almond's treachery she went pale.

"Of course, you killed him, Steve?"

"No."

Her white hands tore at each other. "Tell me the rest, Steve."

Killiard told her, skirting the borderline of truth, leaving out mention of Elizabeth altogether. He stopped, waiting for the axe to fall. It fell.

Her voice was almost uncontrolled. She was fighting down a violent anger.

"You were a fool, Steve, a fool," she cried. "You should have killed Simon. Now look what has happened. Everything is wrong. Everything is ruined unless I act at once. Simon knows of my bargain with the Spanish and he will be expecting a fleet to destroy Chadres. Perhaps he even knows of the causal-thrust recevier you buried in del Azanto's cell."

Killiard lost his temper.

"I think I did a good job," he flared. "And Simon doesn't know about the receiver. It'll stay there and nobody'll know the difference. And please understand that I don't go around killing people in cold blood."

HER face became contorted with wild fury.

"Stop it!" she screamed. "I do not intend to have you insult me." She began to pace up and down the room in long agitated strides.

"Everything is ruined!" she panted. "Now I must go at once to your civilization, del Azanto. I must deliver you to your government. Chadres will be destroyed, immediately. I do not intend to wait for Simon to gather his forces after Steve's stupid blunder."

"Thanks," Killiard snapped. "I like to know what my friends think of me."

She stopped her agitated pacing, halted in midstride, as if a sudden thought had occurred to her. She brought her glance back to the American, her eyes smouldering.

"I sense an incompleteness in your story, Steve," she said.

A cold chill ran down Killiard's spine. For a moment he lost his composure. Then his expression again changed to a cold, hard mask.

"Sense ahead," he said.

He was unable to keep up the deception so he dissembled. He took del Azanto's hand, ignoring Helvina's paling face.

"Be seeing you?" he suggested. "After Chadres?"

The Spaniard's eyes flickered, and Killiard released his hand and went quickly from the room, satisfaction tugging at his lips. Del Azanto remembered the bargain they had made concerning Killiard's use of the transmaterio. To the dickens with Helvina, he thought. He was through with her.

Killiard mounted a flight of stairs to his quarters, which Helvina had apparently reserved for him, and, dog-tired, flung himself fully-dressed on the four-poster bed. A wave of fatigue passed

like a dark shadow over his brain. He was tired, as he had been on the go for twenty-four hours straight. The unjust demands made on his body had their effect. With a tired sigh he gave way to slumber.

CHAPTER XIII

Helvina Strikes

NOTWITHSTANDING his weariness, Killiard did not sleep well, however. He was involved in tortuous dreams concerning Elizabeth. Finally Elizabeth raised her penta-gun . . . but it was not that unfinished scene which awakened Steve. It was a sudden clammy fear that stabbed into his mind —a premonition that brought him leaping to his feet, Elizabeth's name hoarsely on his lips.

The Sun was streaming light through the windows. How long had he slept? He did not know. But he suspected it might be perhaps ten, twelve, fourteen hours. Troubled though his sleep had been, his mind was refreshed, clear as crystal. Or was that the effect of his premonition?

He dressed quickly, in the uniform Helvina had given him long weeks before, in red coat and verdure-green trousers. He left the suite then, went loping up the stairs, three at a time. On the roof, he went on the double-quick toward the half-dozen small time-branch ships reserved for the use of Helvina's staff.

The custodian, came to attention as the American approached.

"I'm Captain Killiard," he added as the man hesitated.

The soldier's hand dropped to his hip.

"Sorry, sir," he said, politely, "but I must refuse unless you have a requisition for a ship from Miss Osternog?"

He ended on that hopeful, polite note, and Killiard hit him with everything he had behind it. The man collapsed and Killiard snatched his keys and tried them on the door of the first ship he came to. He was smiling grimly. But why had Helvina left orders that he was not to be given access to a time-branch ship? Could it have to do with Elizabeth?

A terrific urgency now grew in him. As the ship disappeared from the outside world, he discovered his fingers were shaking. He cursed, and paced up and down the length of the ship. It would take about six minutes for him to get to Elizabeth's cabin. That particular branch had forked away so long before that the amount of causal-thrust which impeded the ship's progress was fractional in v a l u e — .0000000076079 causas, in fact.

Although the branch itself was over a million chronal distant, the low causal-thrust enabled the ship to move at a tremendous rate.

He passed those six minutes in viewing the most horrendous conflagrations he had ever witnessed. It surpassed the ruin of London, the vast, flaming swaths which Allied planes had cut through the heart of Tokyo. Chadres was gone, a flaming, ruined heap. The visichron, never good for close-ups, reached across the parallel branches of time, drew back light rays, and pictured on the screen the result of Helvina Osternog's hate.

The battle was almost over. A few long, slug-shaped ships plummetted through the boiling air over Chadres, now and then descended in wolf-packs on fleeing pirate craft. Pale rays fanned out, driving through those fleeing ships like knives through cheese.

Steve Killiard felt hollow inside, sick with self-reproach. There had been a beauty, a vigorous grace about Chadres that was in strong contrast to the drab monotony of Helvina's London. And suddenly Killiard knew that he would rather have seen Chadres standing in all its ivy-covered glory, pirate city through it was. He preferred Chadres to London, for London was old, uselessly old, and had already died as the souls of that race of humans who inhabited it had died, and did not know it. . . .

He was bitter with that soulless, useless destruction when he finally made a convulsive motion and flipped the tab,

just in time, anyhow. A red light blinked on the instrument board. He threw in the statochron, and went quickly toward the door as the parallelochronic motors idled down to silence. No time to harbor useless regrets, no use to blame himself for Chadres' ruin.

He left the ship, climbing up the slope toward the lonely cabin silhouetted against a blue sky that arched out over the restless ocean. No sound, no motion. He prepared himself. If Elizabeth was not there at this moment, she would be, later. She would have to come back here, for water, for food.

HE FOLLOWED the flag-stone footpath that Elizabeth told him de Paus himself had laid to the door of the cabin. The door was open. Killiard forced himself to make the final step, and stopped stock still.

The room was in disorder. Chairs and tables were overturned, vases were lying shattered, and the thick rug had been rumpled. Steve digested that while a tight, swelling constriction of panic grew in his throat. Elizabeth was gone! Yes, she had been abducted!

He was numbed and cold with that catastrophic discovery. He had come alive through an incredible series of events since that day, ages ago, it seemed, when his bomber had hovered over the wisping smokstacks of a Jap aircraft carrier. He had discovered a world, an infinite group of universes, that was beyond his ken and that of his people. Out of that adventure he had summoned a truth which had impressed itself on his mind.

The Allies had lost, or were losing so drastically and rapidly that their defeat was a foregone conclusion. Under the compulsion of that fact he had glimpsed a straw and grabbed at it. To stall off the yellow, sweeping horde mankind needed a weapon, a weapon so potent there would be no doubt of the outcome. He had found it, and would have it, if del Azanto spoke truth concerning the transmaterio ship.

On that score, he had succeeded. But now that importance was paling to insignificance when compared to the importance of Elizabeth. Did he love her? He had not known. He had told Simon so; he had told Elizabeth so—but it had fitted in with his plans as a spy to deceive them in this manner. Killiard laughed hollowly. Up to this moment when he discovered that Elizabeth was gone, that she was surely in the hands of Helvina, he had deceived himself! Barbarian though Elizabeth might be, infected with a barbarian code of ethics though she was, the mere thought of her plight struck fire in his pulses. And if she was indeed in Helvina's hands.... He thrust the torturing thought away.

He moved into the cabin like an automaton, moved from room to small room, detouring overturned objects. She had put up a fight. She had been a tornado. The men who had captured her—and they must have been some of Helvina's soldiers—had had a battle on their hands. But she had lost and she was gone. Gone!

He did not see the other occupant of the cabin until it was too late. His hand froze inches from his penta-gun as the shadowy figure stepped from the wall.

"That is better, the black-garbed man lashed out. "Up with your hands, Captain Killiard!"

Philippe de Paus, Simon's right-hand man, stepped into the light of a curtained window, his weapon trained squarely on Killiard's middle.

Killiard raised his hands numbly.

"It is my pleasure to meet you again, Captain Killiard. Doubtless I should dispose of you."

"Doubtless," said the American.

"Particularly since you have caused more trouble for us than should be to the credit of one man. Oh, *mon dieu!*" De Paus ground his teeth. "Chadres is destroyed!"

"I saw it in the visichron," Killiard said lifelessly. "I'm sorry. That's all I can say about it, de Paus."

There was a shaken, utterly demoralized expression about de Paus' thin lips. His free hand dashed away his hat. It hung over his shoulders by its black strap. His glance moved over the room.

He cross to a capsized chair, kicked it upright, and seated himself facing the chair's back. His restless dark eyes ceased their alert, agonized motion, and centered on Killiard with growing hate.

"Now tell me your story, monsieur," he grated, "and tell me the truth. I already know of your activities in Chadres. It was Simon's ill-luck that I was not present when he received Almonde's message. That fool Simon. His illness made him a gullible fool. Speak!"

KILLIARD saw no use in holding anything back. He did not. As he finished, de Paus arose again, his lips streaming furious curses.

"That Helvina is a witch if there ever was one. And you were a fool. Helvina would naturally doubt your story—it's her nature. She inspected the ship you escaped in with del Azanto and my—my Elizabeth"—a ghastly pallor overspread his face—"and she knew that it had belonged to a woman. A kerchief, a brooch, a silk underthing here and there. What other woman would it be than Elizabeth? After that, it would be simple for her to have a technician to dismantle the statochron and read off the last time-branch the ship had stopped in.

"Well, enough of this, monsieur." He stopped his furious, wary pacing, stood with planted legs. His gun-hand shook under the passions that gripped him.

"Elizabeth is gone," he said. "She it is whom I love more than life itself. And you?"

He jabbed the gun fiercely.

"I love her, de Paus," said Killiard, simply.

De Paus waved the gun in a frenzied motion.

"Then we two who love her, must rescue her. And we must work together. What have I left now? I am alone. I am without a country. I escaped. The causal-thrust has already woven its pitiless barrier around my time-branch. Simon is entombed. Now Elizabeth must be freed, even if we both die."

He came a step nearer. "You must work with me, monsieur. Will you do it? And remember, Elizabeth's plight may be blamed on you. Oh, Helvina won't kill her outright. That's beyond her power. But she'll give Elizabeth a white-wigged pirate's trial under the maritime laws of her England, and she'll be railroaded through to her death. Well, Captain? Speak!"

"It's a truce, de Paus," said Killiard.

De Paus' holstered his weapon, his face sick and white, and suddenly sat down, bracing his forehead on the heel of his palm. Killiard knew he was looking at a man who was suffering from mental and physical shock. De Paus had lived through the rapacious demolishment of Chadres, the city of his birth, a city as proud of name to him as the Paris of another defeated France. He had escaped, by the skin of his teeth, probably, only to come to this time-branch, where he suspected Killiard had left Elizabeth, and had discovered that Elizabeth was in Helvina's hands. It was enough to throw a stronger man than de Paus completely off balance.

But after awhile, he raised his head and began to talk. He walked up and down the room, flexing his arms, his words low and tense. His only desire, he told Killiard, was to rescue Elizabeth. Well and good. They were both in love with Elizabeth—it was the only thing they had in common, but it was enough to unite them.

"I have my own plan, Captain," de Paus said tensely. "It involves a reconstruction of my face at a place I know of—a disguise. I'll acquire a soldier's identification somehow, probably from a mercenary returned to England looking for work under Helvina. I'll join the English First Stationary Army and find a way to get to Elizabth, if you fail. And your task, of course, will be to go before Helvina. Yours will be the method of logic, while mine will be of violence. You can talk with the witch, perhaps make her see reason, for she's doubtless in love with you. After that, if you fail, choose your own course. I will not fail."

"Helvina in love with me?" said Kil-

liard, sickened. "Why do you think that?"

"What else? Otherwise, she'd not have been so lenient with you and your blunders. You would have found yourself rotting away in one of the filthy dungeons beneath the misnamed Hall of Justice."

It was true and Killiard knew it.

"I'll make a stab at it, but—" He shook his head. "And what if I succeed?"

De Paus grinned a deliberately evil grin.

"Our truce will be at an end, and I'll hunt you down and find my Elizabeth again." He ran his finger in a cutting motion under his throat. "Fair warning, Captain Killiard! But in the meantime, we have one object—to free Elizabeth if we have to fight our way through solid walls to do it. Come."

He loped toward the door, and Steve Killiard started to follow after him. He stopped stock still, his breath sucking through his teeth.

"—If we have to fight our way through solid walls to do it," de Paus had said.

The thought left him stunned. Then he followed the Frenchman.

CHAPTER XIV

Desperate Venture

ABANDONING the pirate ship of de Paus, they took the one belonging to Steve Killiard. It would be less likely to attract attention. De Paus now explained that though they would eventually follow different courses, it was necessary that Steve Killiard see de Paus as he would look when the disguise was finished. One could not tell when such knowledge might be useful.

De Paus took the controls, and settled the ship in an alien time-branch he knew of. It was a strange, exotic land they found themselves in, and Killiard guessed it to be Arabic-dominant.

These people were powerful, carrying on their own diverse trade with a group of time-branches which did not include the English or the Spanish. To Simon, they had been distant, mutually wary friends.

De Paus had his purpose in coming here. This was a city in north Africa, a steaming hot tropical place. Within the city was an establishment which had before this served Simon. The establishment catered exclusively to facial reconstruction, and would afford de Paus the disguise he needed to carry out his plan.

Steven Killiard had to admire that handiwork. De Paus had not been changed physically. The mere addition of wax in his jaw-line, in his nose, a skin-bleach which whitened his dark skin, made a transformation that was startling. One would have had to look closely to discover the real man, and then only if one knew he was de Paus.

De Paus, at any rate, was satisfied.

"Good job," Killiard conceded. But he was frowning inwardly, and a possibility that he had overlooked now thrummed its warning in his mind. Disguised thus, de Paus could do more than devote himself to Elizabeth's rescue. . . .

Both Steve Killiard and de Paus knew they could not land anywhere in Helvina's England without detection. They therefore landed in an out-of-the-way corner of that particular world, sold their time-branch ship to an illegal dealer, and booked passage on a passenger "wing" to London. Three days after the ruin of Chadres, the two men, unnoticed save as two passengers, walked down the gangplank into the heart of the metropolis.

That night they spent at an inn, and the following day roamed the city, keeping their ears open. With renewed sadness, Killiard now caught that note of decadence among these people. They had lost their stature as well as their mental toughness. Something, a vigor, a restraint, a strength, was gone, and gone for good. He and de Paus towered over these weaklings.

They were rich, but they lived on the riches that their forebears had created. Killiard wondered what would happen to

these people when the dead, unpopulated cities no longer yielded their ready-made materials.

They learned what they had dreaded about Elizabeth. Her name was on every lip in that city. The day before, Helvina had ordered a celebration to commemorate the destruction of Chadres and the sealing up of the time-branch. The celebration had been lavish, particularly since it had been at the expense of the state. Simultaneously Helvina had announced that Elizabeth of Chadres was captured, and would be tried fairly at the Hall of Justice, under the maritime laws of England.

"Tried fairly," said de Paus, his lips quirked with a black sneer.

They were at that moment standing on a street corner, reading a radio-board. Radio boards were the equivalent of newspapers. They were made of a plastic compound treated in such a way that they picked up a certain radio broadcast and hourly changed their long rows of print to conform to the latest news. One needed but one radio-board for a lifetime and was taxed but a few shillings a year to maintain the government-owned newscasting stations. They were widely used in numberless time-branches.

The radio-board stated Elizabeth of Chadres was held prisoner in luxuriously furnished, quarters beneath the Hall of Justice. De Paus bit at his lip with repressed fury.

"Elizabeth is going through awful suffering at this moment, Captain," he said. "Luxuriously furnished quarters? Hah! More likely a damp, miasmic cell without a ray of light. But Helvina chooses to make the people believe her a goddess, not the evil creature she really is. Well, she failed either to capture or kill Simon, and I hope her warped mind will experience tortures for that. And when London falls—"

HE STOPPED and cast a quick glance at Killiard, but the American kept his face impassive at what had obviously been a slip of the Frenchman's tongue.

They parted the following day, and Killiard stood watching the slim, powerful figure striding down the street and away. There was a spark of anger in the American's eyes. De Paus had left with the single word, "Success." But deep beneath the man's demeanor Killiard could sense a threat and an undying hatred. And Killiard remembered that finger which de Paus had drawn across his throat.

An hour later, Steve Killiard was striding up the tree-bordered walk toward the House of England, from which Helvina administered the affairs of her world. His red coat, buttoned compactly up to his neck, would have seemed flamboyant if these English had not used such blatant shades almost exclusively.

He handed the sentry, standing at the spiked gate, the identification card Helvina had signed for him months ago. Of course, she might have a warrant out for him by this time, but that was a chance he was forced to take.

The sentry glanced idly at the card, handed it back.

"Pass, Captain Killiard." The sentry stepped aside, looking enviously up and down Steve's six feet.

Killiard walked on and suddenly found himself sweating. Of course, it would not have made a bit of difference, so far as the result was concerned, whether he was taken before Helvina at the point of a penta-gun or went there of his own free-will. But that he could pass unmolested was an indication, in some measure, that he was not entirely in Helvina's bad graces.

He passed into the echoing halls, quickly mounted the stairs to the quarters Helvina had originally given him. He pushed open the door and closed it behind him.

The suite was empty. Whether or not it was still "reserved" for him did not matter. He stood there quietly, considering. He did not want to face Helvina in her own administration chambers, where she would have over him the advantage of her position. He wanted her here, where they would be a man and woman, talking. A minor point, and yet an important one.

He crossed swiftly to the inter-communication television cabinet, flipped the tab, and twirled the rheostat. A formal voice spoke questioningly, boredly.

"Captain Killiard, requesting to speak with Miss Osternog," said Killiard.

"It will be impossible at this moment, Captain," the voice answered. "Regent Osternog is in conference."

Killiard bit his lip.

"Please send Miss Osternog a tube-card explaining Captain Steve Killiard awaits her pleasure," he said.

"Very well. Keep your connection open." The instrument went dead.

Killiard took one impatient turn around the suite, stopping at the sunlit window. From here he could see the plain, unsymmetrical exterior of the Hall of Justice, a block distant. Elizabeth was there . . . living in what horror? A lump suddenly formed in the American's throat.

"Your connection has been made," announced a voice.

Killiard turned quickly. His eyes widened with surprise.

"Helvina!" The word from his lips in a whisper.

She was limned in the plate, visible only from the base of her black-clad shoulders to the top of her ash-blond head. She was studying him intently, without a change of expression. The faint dark circles under her eyes and the waxen pallor of her face plainly revealed the conflict she had undergone. Yet she was still lovely in a pale, colorless way. Killiard felt as if he were face to face with a ghost.

"Helvina," he stammered. "You've changed."

At last she smiled, sadly.

"Perhaps, Steve. One cannot go through what I have witnessed and remain the same. Chadres is destroyed, as you know, but—" she stopped and her breast rose and fell rapidly—"but Simon lives."

Killiard fought back an impulse to pity her. "Others cannot go through what you have made them go through and remain the same either, Helvina," he reminded her.

She said nothing. He added, out of a growing fund of exasperation.

"And it doesn't matter about Simon, no matter how much you think it does. He's sealed up in his time-branch. He's powerless now."

"Powerless." She bit at her trembling lip. Her hands crept shakingly to her throat. "You don't know what you say, Steve. He lives in my mind. He sits there, and I hear his cruel laugh, and I know he taunts me. Please stay where you are, Steve. I will come to you. Then you can tell me whatever it is you wish to say." Her image faded. The connection went blank.

Killiard stared at the plate for a long moment, his heart beginning a slow sickening tumult. Something had certainly happened in Helvina's mind. Crazy? Was she a crazy she-devil, an inbred scientific genius? Thus his unsettled thoughts ran, and thus were they running when the door opened and Helvina stood on the threshold.

SHE moved into the room with a natural, uninhibited grace and closed the door behind her.

Her lips parted. "Steve, I will not ask you where you have been or what you have been doing," she said. "Nor will I reprimand you for using your strength to subdue the guard on the roof and steal a time-branch ship. I am beyond reprimanding you now for anything you may do."

She stopped and moved closer. A flame leaped across her face, glorifying it like the portraits of some lovely women Killiard had seen in Chadres.

"Why did you come back here, Steve, when you knew I had justifications to do as I ought to do with you?" she asked. "Was it because—"

"No!"

He cut her off before she could go on.

"I came back because of Elizabeth."

"About that Elizabeth?" Her eyes dulled. The radiance immediately died out of her face.

"I want you to free her," he said as he gripped her arms. "I know what drives you, Helvina, and I understand. Del

Azanto told me the story. But you're wrong. By heavens, it's wrong. Chadres is destroyed now, and there's no chance of talking you out of that now. Maybe you couldn't have been talked out of it. But if I had understood what went on in your mind, I would have tried to disssuade you. It was useless just as it's useless to brood any more about Simon. He's no more misguided than you are yourself. Forget him. Let him live on. He'll have plenty of time to think over what he's done, and what he's lost."

Her eyes were limpid pools. Her body shook briefly with a bewildered sob.

"But—but Steve—" she whimpered.

"But what?"

"But I haven't killed him yet."

"But I just told you—" He stopped, appalled at that protest. He remembered his conversation with Elizabeth, Helvina's half-sister, how he had tried to show her that people, real or unreal, were still alive and human. And he had met a blank wall beyond which his logic seemingly could not penetrate. But here it was worse, infinitely worse. He could talk till doomsday, and out of Helvina's child-like selfish lips would come that same protest.

His voice seemed far away, detached from his body.

"And what about Elizabeth, your own flesh and blood, your half-sister?"

"She must die too."

Killiard's hands slid down her arms to her wrists, closed around the fragile bones with a tightening grip. She made no effort to break away, but her eyes grew big with pain. Suddenly she gasped, and drooped forward.

She flung her head up. *"I will not kill her,* Steve," she gasped.

Killiard released her wrists, hope suddenly leaping within him.

"If you will rule England with me," she then added. His arms fell to his sides. A cold numbness grew at the base of his brain.

"What?" he whispered.

"Yes, Steve!"

Her hands crept up to his shoulders, fluttering nervously. Suddenly she was babbling, a child with its mind revealed, all the horrors of the dark breaking into speech.

"I love you—I love you so terribly, that first time I saw you, Steve, standing there, you seemed to tower. I thought then of my people, my little people, with their small helpless minds, and wondered then where they were going, and where I was taking them, and where I could take them. Their future is all so dark. Nothing remains for them. What is there left? Something has gone out of them and I must put it back. Yes, I have been thinking of that. I have been thinking of that as fiercely as I have been thinking of Chadres and Simon and Elizabeth. Oh, it hurts, Steve, to think of my people."

She was weeping unrestrainedly.

"Then you came, Steve," she whispered, "and I saw that I loved you, and I saw you as a leader—a man among children, guiding them, putting into them what is lacking. And I saw our children. They would be strong like you."

"You don't know what you're talking about," protested Killiard.

"But I do, Steve." Her arms tightened fiercely around his neck, drawing his head down toward her parted lips. For a moment she held him thus, pleading.

"Oh, Steve!" she whispered. "We could be happy, you, me, my people—all of us. And Elizabeth would be freed. I could no longer hate her then, or Simon. We will rule my world together, Steve."

For a moment Killiard stared at her radiant transfigured face. Then between them came a vision of Elizabeth. Instead of Helvina's face he saw that of Elizabeth. The bronze smooth skin of Elizabeth, with her cool greenish eyes, and her modest blush when he had told her he loved her. He remembered the kiss they had exchanged while standing on a cliff edge in a dead branch of time, with the wild glory of a lost, raging sea and a lost, mellow sun arching away into the misted horizon.

Relative values came into true focus again, and he discovered this woman had no power over him.

His hands fumbled at her arms, drew

them away from his neck. As he released them they dropped limply to her sides.

He stepped back from her.

"No, Helvina," he told her

A DARK shadow seemed to settle upon her as she stood there. Her face was stained with dried tears and robbed of emotion by that invisible shadow, the shadow that hovered grimly over the decadent heads of her people. Slowly her hands crept up to her brow and pressed, as if she were forcing back a numbing thought that had again started its slow, maddening revolutions in her mind. Her eyes no longer saw him, but looked into fathomless distances, where horror lay in its lair, and like an ambushed beast.

She spoke presently, her voice thin, stringlike.

"There is nothing so cruel as what you have done to me, Steve, I who would have had everything if I had had you," she said. "Perhaps now it cannot be, unless you come back to me, sometime. But it will have to be sometime soon. Elizabeth will be tried. It will be a long trial that will break her heart, and torture her. For now I hate her even more than I hate Simon." She did not look at Killiard.

"Simon," she muttered. "Simon, even now, lies sealed away in his time-branch, but he is gathering a fleet—I feel it—a fleet, from all corners of his world. A great fleet, I think, greater than that which he had time to prepare for the protection of Chadres. For he remembers Chadres, and will not forget."

She shuddered, brought her glance and her thoughts back to the present.

"I shall permit you to live and go where you will, Steve. Perhaps, as the weeks pass and Elizabeth proceeds slowly to her death, you will come to me and I shall be happy at last. Or perhaps you will never seek me out. Then your heart will know some of the pain I feel, when that Elizabeth hangs with black face and broken neck and writhing legs from the gallows the State's hangman will prepare for her."

She turned swiftly, drew the door open, and briefly scrutinized his paling face. A gloating maliciousness swept from her features the strange, tragic beauty that was hers. Then she left him, and Killiard was alone with the black horror of the picture Helvina had painted.

Alone, and free to go. And he knew where he would go and what he would do. He remembered the clue de Paus, at that moment probably slicing the throat of some mercenary for his identification papers, had given him, inadvertently.

Through solid walls!

CHAPTER XV

Underground Journey

LYING parallel and coexistent with our time-branch, yet separated by distances which are incomprehensible, distances which can be described only in terms of a unit called the chronal, are an infinite number of other universes.

They spread endlessly, and where they stop, how they could stop, no man knows. One cannot conceive of where or how they stop any more than one can conceive of where or how time or space ends. This is the Problem of Limits, which the mind of man is unfitted to touch upon heavily, much less solve.

The Spanish-dominant branch occurred——how?

This is a world that could have been *if*. The *if* occurred. The Spanish Armada defeated the British fleet, overran England. The Spaniards put their own king on its throne, and subsequently broke down the stiff English resistance in the Americas, which had been discovered barely a century before, conquered those continents developed them, and made them Spanish territories, which they are to this day.

Time having been turned aside, the eighteenth century Spanish War of Succession was never fought, and Philip V—coincidentally having the same name as he who lived in our history, but being

quite a different "if" person—never renounced his right to the French throne. Consequently, instead of Austria receiving Spanish Netherlands and the Spanish territory in Italy, Spain retained those territories, and also made Austria and Italy protectorate states, soon including the whole of Europe with the exception of Switzerland.

Such momentum could not be stopped. It spread through Africa, to the Orient. Australia, the Phillipines, the Indies, and all of Manchuria, though China retained its independence. India and Java. And Japan, being at that time merely an island populated by savages, also fell, and never knew independence again.

In this world of if, then, the year of 1943 A.D., Spain was the principal cultural and scientific force in the world, with Madrid as the Mecca of the arts and the sciences. And the University of Madrid, perched atop its high plateau overlooking the lazy, muddy length of the Manzanares River, was the proving ground, had been for centuries, of all the great names in science. One of these, of course, was Alonzo del Azanto y Lucientes del Morales, by special dispensation from the king in charge of the laboratories of the University of Madrid.

Del Azanto was alone this night on the ground floor of the Research Building, his bright dark eyes moving over the cabalistic rows of figures on the sheet of paper with the nervous, thalamic energy of a bird, his Moorish-black hand, with the thinly tapering fingers of an artist, hovering over the sheet, ready to fill in an abstruse equation. But something was stopping him. He shook his head with an impatient, disappointed sigh.

These figures contained the theory of operation of the transmaterio ship. Ever since Helvina Osternog had deposited him safely in his own civilization, with the exception of the time spent in a joyful reunion with his family, he had been at work on these figures, fulfilling his half of the bargain he had made with Captain Steve Killiard. Nor was he doing it purely out of a sense of obligation. Hating war himself, in spite of the numerous bloody wars of conquest his own country, Spain, had waged these past centuries, he would derive a soulful pleasure from stopping a war in another branch. Besides that, he had a warm affection for Captain Steve Killiard.

The transmaterio ship—the "through-matter" ship—was, of course, completed. Del Azanto had supplied the theory, and Helvina Osternog had designed the ship, the controls, and applied the theory to machinery of her devising. The ship would work as the theory demanded. But the theory, as represented by these figures, was now revealing a glaring fault which del Azanto crestfallenly admitted he should have seen before.

A red light suddenly winked on a call-board across the room. Del Azanto frowned at it, and reluctantly laid his pencil down. He hurried down long echoing halls, his smock flowing out behind him. He unlocked the outer door swung it cautiously open.

AT ONCE, his dark, scarred face broke into a wide grin of delight. He grasped his caller's outstretched hand in both his own.

"Captain Steve Killiard," he cried warmly.

"None other," admitted Killiard, grinning back, but forcing the grin somewhat. "I got in from England—English-dominant, of course—on the last passenger liner. They told me down at the inn that you were still here, working, so I walked up the hill. Glad to see you again."

There was a subdued, sombre note to his voice that made del Azanto look at him sharply.

"As I am glad to see you," he cried. He locked the door again, and led Killiard back to his laboratory. Here he turned, surveying the care-worn face of the American.

"You are not looking well, Captain," he said. "Something is wrong?"

Killiard slowly sat down, stretching out his long legs, studying the tips of

his boots. He did not raise his eyes.

"Elizabeth," he said, after awhile. He looked up, smiling crookedly. "You know about that?"

Del Azanto's expression was pained. "I know. News has come through. But there is nothing that you or I can do, alas."

Killiard met his glance steadily, a fire growing deep in his eyes.

"There is something you and I can do," he said grimly. "I've been thinking it over. I'm going to get Elizabeth out of the hands of that she-devil if it's the last thing I do."

Del Azanto's lips formed the words "she-devil" questioningly.

Killiard locked his powerful hands together. He told del Azanto of his conversation with Helvina, but said nothing of de Paus.

"Helvina is not actually in love with me," he sneered. "She's incapable of any true love."

Del Azanto's soft eyes were gentle.

"Perhaps," he conceded. "Helvina is a strange woman. And so now her hatred of Elizabeth is all the deeper?"

"Much deeper," Killiard said.

"What are your plans?" asked del Azanto.

Killiard spoke deliberately, his eyes narrowing.

"I'm going to get Elizabeth out of Helvina's hands, as I said. To accomplish that—I'm going to ask you to use the transmaterio ship."

Del Azanto's expression did not change. But suddenly he bit at his lip, snapped his fingers, and jumped to his feet. He took a quick turn up and down the room, his dark face agitated. Finally he stopped.

"I cannot, Captain Killiard," he exclaimed. "Oh, I understand your purpose, to fit the transmaterio ship with a time-branch traveling attachment, to move through solid earth and rock to the place of Elizabeth's imprisonment, and then to return with her. But it is impossible."

He suddenly drew a chair close to Killiard and leaned forward, his eyes alight with sympathy.

"Do you not see it?" he said vehemently. "We are diplomatically friendly to Helvina. To fall in with your plan—to help you, in any manner, actually to assist you in accomplishing such a jailbreak—well, it is a crime. I would be a criminal, myself, wanted by my own state. I—"

He stopped as he saw Steve Killiard smiling queerly at him.

"Oh, I know what you think," he snapped heatedly. "You have saved my life. You have been materially helpful in removing the menace of the pirate civilization. You believe that I am obligated to you."

"You're not obligated to do anything," Killiard exploded in hot anger. "I'm asking you, man to man. I love Elizabeth. She's innocent. And I can't conceive of your standing by while she goes to her death. Even if you do dislike her."

"It is not that I dislike her. I pity her, Captain. Her mind is in a worse trap than the cell Helvina keeps her in. She sees nothing but what her father taught her. How will she ever see anything else?"

FOR a moment they glared at each other. Then a confused, hurt expression appeared on the scientist's thin face. He grasped Killiard's hand.

"Let us not quarrel," he begged. "All my objections are as nothing. True, it would be a crime for me to assist you. But even if it were not—" He stopped helplessly, and spread his hands in an age-old gesture of defeat "—the transmaterio would not be ready in time. It may never be ready. Captain, it is impossible to help Elizabeth in the way you suggest. The transmaterio simply does not work!"

An eternity of time seemed to pass after that announcement.

Steve Killiard spoke, at last, softly.

"It has to work, del Azanto," he said. "That's what I've been living for. Remember? You said it would."

The other shook his head despairingly. "I know, I know! But that was then. I promised to give you a trans-

materio, to take back to your own time-branch, to stop a war taking place there, to defeat your enemies. But since that time—well, there is a flaw—a terrible flaw which makes the machine virtually useless."

"I'll find the flaw and correct it," said the American. His jawline grew stern.

"What?"

Del Azanto stared, burst into a laugh, and stared as if he had not heard aright. Then a startling change came over his face.

"Eh!" he exclaimed, his Moorish-black brows drawing up in astonishment. A repressed, glowing excitement appeared in his eyes. He turned hurriedly, barely taking the time to call Killiard after him. The American followed him, blinking.

Del Azanto led him down an echoing staircase into the bottom cellars of the building. He snapped a light, revealing a large, brick-lined room. Stretching along the length of the room was a cylindrical craft, in shape similar to a small time-branch ship. Del Azanto slid open the door, wordlessly urged Killiard in. He went forward, snapping lights along the way, and instantly sat down before a complex control board.

Below Steve Killiard's feet motors began to hum.

"But I thought—" he began, trying to catch up with events.

His words were chopped off cleanly. The walls of the ship suddenly became almost perfectly transparent. Del Azanto himself turned to a gossamer-like being, with a red heart, lungs, internal organs and skeleton faintly visible.

Killiard went cold and with horror saw that he had no trouble looking through a hand that was like glass.

The floor outside the ship began to rise, apparently. Like a flooding tide, it came up through the bottom of the ship, lapped over Killiard's ankles, up to his knees, over his hips, his shoulders. Just before it reached his eyes, he frantically tried to evade it. Too late. He was inclosed in solid matter, and in solid darkness.

He heard del Azanto's soft laugh while he fought the horror of that immersion.

"No danger," del Azanto assured him. "Not yet, at any rate. There. This will relieve you."

A SOFT, reddish glow flooded the ship. Del Azanto and the interior of the ship were now visible as perfectly solid objects while the matter through which they had sunk had turned transparent. They were moving through yellow clay, with white rocks of various sizes apparently suspended without support as they drifted upward to disappear through the top of the ship.

Steve held himself rigid, hardly daring to breathe. Then he moved forward and gingerly seated himself in the chair next to del Azanto, gingerly, because he suspected it might prove to be unsubstantial. It was not. Amazed, he watched del Azanto's hands hovering over the controls. Del Azanto turned a laughing glance at him.

"You are surprised?" he asked naively.

"Surprised," Killiard choked. "Good heavens, you should have given me some warning. I thought you said the ship wouldn't work."

Del Azanto's expression turned troubled. He shrugged.

"It doesn't. Wait."

They moved horizontally now, matter drifting ghostlike to the rear, disappearing. Steve saw by a meter that the ship was a hundred feet beneath the surface of the ground. A television plate, operating on an extremely short wave-length, del Azanto told him, now lighted and showed the spires and castellated minarets of Madrid, across the Manzanares River.

"We're heading for the river," Killiard said hollowly.

Del Azanto nodded.

"True. I believe we'll be able to make it across and back before the heat starts."

Killiard understood what he meant by that some ten minutes later. They were returning across the river, water moving without sound through the ship, when Killiard began to grow uncomfortably

warm. Del Azanto began to perspire also. He touched a button, and a fan whirled, sending cool breezes through the ship.

"That won't remedy the situation though," del Azanto said. "Look here." He went to hands and knees after locking the ship's controls, energetically raised up a trap door. A wave of smoke and heat rushed out, smelling of burned insulation. Below, Steve Killiard saw three massive engines, cased over with steel. The steel emitted a faint red glow.

"The motors," del Azanto told him grimly, "are burning out. Slowly. We'll have time to get back to the Research Building. But the armatures will have to be rewound and new tubes installed. Those motors last only thirty minutes —we've been gone twenty-five. In another five minutes, if I didn't get the ship safe on the surface, the motors would disable themselves and the ship would suddenly materialize — b e l o w ground."

"What would happen then?"

"We'd become chunks of super-dense matter. The molecules of the ship and the molecules of normal matter would 'fix' to each other. We'd be eternally entombed below ground. So my theory says."

"Is the theory right?"

Del Azanto looked up at him, grinning.

"I suspect it is. But if it isn't, I don't propose to find the truth by experimentation."

He lost the grin and scowled blackly. He stamped the trap door shut. As if suddenly aware of passing time, he hurriedly seated himself.

The television plate showed an interior of the Research Building. Matter started dropping downward. Seconds later, the heat beneath the floor boards was so intense Killiard jiggled his feet as they left the ship, which was now quite solid in reference to normal matter.

Del Azanto looked at the ship in exasperated chagrin.

"Well, there is the trouble. One travels for thirty minutes and the motors overheat. Nor are auxiliary motors the answer. In the fractional second while the auxiliaries cut in, the ship would materialize. Nor could one have two motors working, and ease one out to let the other take over the whole job. Such a procedure would divorce the matter of the ship from normal matter forever. The repellent field would have twice the intensity.

"As the ship stands, one can use it for twenty minutes, and, after five minutes to rest the motors, may start it up again. Use it for a full thirty minutes, Captain Steve, and it becomes necessary to rewind the armatures, even install new motors. I doubt whether it would be—ah—expedient to stop for such installations in the middle of a war."

HE GLANCED quickly at Killiard's face with grim humor.

"Nor to free Elizabeth," Killiard said helplessly.

"No," agreed the Spaniard. "Nor to free Elizabeth. Since the ship would have to be fitted with parallelochronic controls, it would have to land a considerable distance away out of range of Helvina's detectors. It would have to bore the rest of the way, more than a half-hour's journey. However—well, I believe you mentioned something about finding the flaw, and correcting it?"

His eyes twinkled when Killiard blinked. Suddenly he dropped a friendly hand on his American friend's shoulder.

"To be a scientist, Captain, sometimes means to be so tied up in the laws of science that one is blinded to the beauty of a waterfall. You see? I should not have laughed at you before. It is extremely possible that you can find the flaw in the machine and correct it."

"You mean—?"

"Exactly. A layman's mind is untrammeled by scientific superstition. Half the world's great discoveries have been made by laymen—by amateurs." His voice grew tense. "And who knows? You may be able to furnish the clue, and one grain of truth is all I'll need. That will enable me to finish the ship to my

satisfaction, and yours."

Killiard bit his lip.

"I think I could do it," he said quickly, "if I had the time. Elizabeth will have a long trial, according to Helvina, but what if—" He stopped.

"What if Elizabeth is sentenced and executed before the ship is perfected?" the scientist finished. His grasp tightened on Killiard's arm. "It will not matter," he said softly. "It is your country you must think of first. You are fighting for them, Captain Steve. Remember that."

Steve winced, but his shoulders came erect, a fighting warmth to his eyes. Del Azanto was right. Above all else, the transmaterio must be perfected for his country. That was paramount, now. Individuals no longer counted.

CHAPTER XVI

Death Sentence

SO GRIM was the expression which had come into the young American's face that del Azanto's eyes sparkled.

"Good," said the Spaniard. "Please remember officially I am not helping you to release Elizabeth." He reddened under Killiard's searching glance, and Killiard knew he had scored a victory. For del Azanto meant to allow him to use the ship as he pleased, providing the mechanical drawbacks had been overcome.

Neither Killiard, nor, it must be admitted, del Azanto, expected that the American would actually bring forth the solution to the perplexing problem. Killiard applied himself into the work with more energy than confidence, desperately hoping that some clue might present itself, and quickly. He knew nothing of science, yet he managed to grasp the simplified theory that del Azanto gave him, and went on from that to a study of the interior of the motors which so enigmatically refused to function as they should. Then was given his instructions in the matter of operating the ship.

And yet he did mention his ultimate hopes to del Azanto, only to discover that if he wanted to help Elizabeth of Chadres, the time-branch travel accessory machine could not be applied to the ship in a short time.

Three weeks passed before del Azanto would trust him with the operation of the ship. During those three weeks he knew utter despair. He was a raging human volcano, blowing his head off at periodic intervals. The situation seemed hopeless, even if he did solve the problem. Elizabeth was being tried.

In his quarters at the inn in the valley below the university, he spent his few hours of relaxation with a time-branch radio, picking up commentators from Helvina's London. He followed her trial daily, his every nerve strung taut. He grew thin, gaunt. Harsh, strained lines appeared about his eyes. His feelings overcame him at times and made his voice an unpleasant rasp. Ostensibly, Elizabeth's trial was fair and conducted in the approval legal manner, with white-wigged barristers and judges and jury.

It was a slow trial, the court meeting for an hour or so every day. Its slowness was all to the good as far as Killiard was concerned, but it was obviously one of Helvina's torture devices, slow torture for Elizabeth, for she, as well as Helvina, must have known there was no hope.

The crimes brought against Elizabeth of Chadres were many and varied. She was convicted of them one by one. Therefore, her trial was really a series of trials, sentence to be delivered as she was convicted or acquitted of the last charge to be made.

This system, the commentator smoothly told his audience, was one which had not been in use since it was inaugurated in 1870 for the punishment of certain criminals who had used the world's terrorized state following the Chemical War to victimize certain helpless persons. Helvina had revived the system for Elizabeth of Chadres. It seemed to suit the case.

None of the commentators made mention of the fact that Elizabeth of Chadres was Helvina Osternog's half-sister; nor was this fact brought out during the trial. There were only witnesses who told of seeing Elizabeth in the front line of her father's forces. She had personally killed a man named John Stacey, a mercenary from Australia.

Two more men had been bound and gagged on a London street one night by five pirates who were with Elizabeth. Elizabeth had been taking the statochronic position of a food warehouse which Simon later plundered. The pilot of a "wing," flying from the interior of Asia to London with a gold-shipment, had been forced down at the point of a penta-gun Elizabeth of Chadres had held on him. Pirates had appeared and loaded the gold-shipment, along with Elizabeth, into their time-branch ship.

"The pirate-queen," the commentator announced with all the poetic sensationalism of the radio commentators of Steve's own branch, "haughtily denied this charge, as she has all the others."

She was convicted on that charge, however, as she was on the others.

Killian turned cold. What if they suddenly decided to sentence her on the basis of those convictions now made—sentenced her tomorrow?

KILLIARD paced up and down the laboratory, as he confided his fears to del Azanto. The result of that was that the transmaterio was hurriedly equipped with parallelochronic motors and time-branch controls. It could now travel from time-branch to time-branch, and also move underground—for some thirty minutes. If forced to it, Steve Killiard would take a chance against incredible odds.

Del Azanto was gentle.

"All this will do you no good, Captain Steve. Detectors will immediately note your presence, and even though the ship disappears under ground, you will not succeed in your purpose. Helvina will be notified, and she will understand at once that a transmaterio—the ship she helped me to create—is in use. Soldiers will be waiting for you at Elizabeth's cell door, even if you should discover her cell immediately. But the chances are, it will take you a full half-hour to find the cell. Then you will have to rest the motors for five minutes before they are useful again." His face fell. "And if Helvina should find out that I assisted, great evil will result."

"I'll materialize the ship outside the city beyond range of her detectors," Killiard snapped. "And if I am captured and questioned, well, I stole the ship."

"You can materialize the ship only if the machinery works flawlessly. It will take you a full half-hour to arrive at the Hall of Justice. Even more. The ship travels at only thirty miles an hour top speed, remember." He stroked at his jaw, his thin brows falling in a frown of puzzlement. "Although, according to the theory, it should move at approximately a hundred miles an hour."

In the sixth week, Killiard still looked blankly into an uncertain future. He and del Azanto had taken innumerable trips through solid earth. The engines had been dismantled, thoroughly inspected, and the flaw was still not found. To make matters worse, Killiard was left alone with the ship for several days, without the presence of del Azanto to give him a word of encouragement and hope which he sorely needed. For del Azanto confided that Helvina had got in touch with him, had demanded that he complete the auxiliary causal-thrust station.

Del Azanto had grinned tautly, with a wry flash of white teeth.

"Helvina still fears Simon, terribly. What if the artificial causal-thrust station in London should break down, she asked me. Nor did she have any reason why it should break down. Well, I suppose the possibility is there, Captain, so I'll have to be away for some three or four days. We must have our own station ready to throw into the breach in case something does go wrong with that one of Helvina. Though what could go wrong, I don't know."

Events occurred with a startling rush, as though the absence of del Azanto had

released the trigger of a catapult.

Steve Killiard moved through a soundless world, a mile beneath the surface of the earth, his body passing through "solid" masses of twisted magma. Dark circles of sleeplessness ringed his eyes. His thoughts were the neurotic ones of a man on the verge of a breakdown.

Elizabeth's trial was plainly nearing an end. What could he do? And there was another problem. Forcefully, the need of a perfected transmaterio for the Allied forces of his own world had come to him. It was the one weapon which he felt could adequately be used to utterly defeat the enemies overrunning his people.

There were other weapons—force fields, disintegrators, heat rays, paralyzing rays—which would be useful, and the plans of which he had decided to take with him when he returned. But they had certain drawbacks. They were good only up to limited distances. After that, they simply dissipated.

Furthermore, to manufacture such weapons on the grand scale that was demanded would prevent their use in time. And time was of the essence. But a half dozen large transmaterio ships could be made in jig time, transporting men and materiel into the heart of enemy country. The war would be over in a maximum of six months!

But the flaw was there, and with the flaw the transmaterio was useless. . . .

As he drove the ship on, his thoughts returned to de Paus. A cold shiver passed down his back. De Paus! The man had had something in mind besides Elizabeth's freedom. What could he be plotting to do? And what had he been doing these last six weeks? Laying plans, of course. What if he did accomplish Elizabeth's freedom? Killiard ground his teeth with pain at that thought. Of course, he would never see her again.

BUT if de Paus could rescue Elizabeth—good! It made no difference. Killiard did not doubt that Elizabeth hated him.

Today he had been twenty minutes below the surface of the earth. He now set the controls, allowed the ship to drift slowly upward. He got down on hands and knees, pried up the trap door in the floor and watched the machinery as it slowly took on its all-too-well-known red tinge.

Rage grew within him. That tantalizing machinery! How often had he taken it apart? Well, this time he was going to go whole hog. With viciousness, he unscrewed the casings to the motors, using asbestos gloves. The insulation was already beginning to smoke, but he had ten minutes.

He watched the opaque master tube with a feeling of revulsion. What went on inside that tube? He had suggested to del Azanto that the lead casing be taken off while the ship was in motion. Del Azanto had shaken his head. If exposed to the radiations which would emanate, a man could be severely burned. Anyway, del Azanto told him, the trouble could not be there.

Killiard cursed. Hadn't del Azanto told him that a layman might blunder into the solution of a problem where a scientist would see nothing?

His lips thinned. He clapped an asbestos helmet on his head and grimly went to work. He had the lead casing off the master tube in a half-minute, and was lying on his stomach, peering into the glowing interior.

He saw nothing. Indeed, what was there to see? The tube was working perfectly, as del Azanto—or was it?

He tensed. Briefly he saw it, flashing across the tube as a meteor might streak across the night sky—a little burning dot which had emerged from the side of the tube, moving with terrific velocity toward the grid plate. And as he watched he saw another. Questions started in his mind. Whatever phenomenon that was, it should not occur. And to make that comparatively huge streak, it would have to be a molecule—a molecule of normal matter! But how could a molecule of normal matter get inside?

His thoughts tumbled over each other, and his pulse crescendoed. Why, this meant—

"Got it!" he whispered. "By heaven, I've got it!"

Del Azanto's auxiliary causal-thrust station was sixty miles away at the other side of the city. He had not yet finished work on it, but nonetheless he dropped what he was doing at the urgent excitement in Killiard's voice, and showed up at the laboratory fifteen minutes later.

He listened cautiously to the American's description of what had occurred in the tube. There was a pity in his eyes which Killiard, in his excitement, missed.

"It tallies," Killiard cried. "Look here! This explains everything. Molecules, according to theory, don't actually touch each other when they collide. The force-fields surrounding them impinge on each other—the molecules bounce away. The transmaterio motors simply cause the force-fields of the molecules of normal matter to acquire the same magnetic sign as the force-fields of the molecules of the ship. Like poles repel. So the molecules of the ship and the molecules of normal matter repel each other, the molecules move in orbits which do not coincide, and so the ship simply moves through the vast spaces between molecules."

Del Azanto nodded.

"Of course. That's the theory."

"But the theory does not work perfectly."

Del Azanto's eyebrows shot up.

Killiard went on tensely.

"The ship has to grab hold of something to move, doesn't it? Well, your theory states that it grabs at the solid, stationery ether. But if it did grab at the ether, it would move at a hundred-mile-an-hour clip instead of thirty miles, wouldn't it?"

Del Azanto was cautious, fondling at his chin. "The theory says so. It should move at a hundred miles an hour. There is something wrong."

"I've found it. Those motors don't grab at the ether at all. They propel the ship by pushing at the molecules of normal matter. That's the reason the ship doesn't move as fast as it should. Ether is *stationary*. Molecules are mobile. The molecules of normal matter gave way when the motors pushed at them. There wasn't a solid base to push against. Result, only thirty miles an hour."

A STARTLED excitement quivered on the Spaniard's dark face. He gripped Killiard's hand.

"You're sure of this?" he snapped.

"Sure I'm sure of it. Killiard laughed excitedly. "The proof was in the master tube—the same tube I wanted to look into, but you wouldn't let me. But I looked at it this time while it was in action. Oh, I didn't look long enough to get burned, just long enough to see a half-dozen molecules of normal matter shooting across to the grid plate. The field the motor generates pushed at normal molecules to move the ship, but there was a backwash! Normal molecules got tangled up in the machinery, not only in the master tube. They were simply visible there. But in all the machinery—in leads, armature windings, insulation, casing. The machinery was absorbing them, converting them into pure heat, and the motors after awhile couldn't take it. After approximately thirty minutes."

Del Azanto pushed him away with a baffled, self-reproaching look, and feverishly ran through the papers in his desk drawer. He emerged with his figures on the transmaterio, with shaking hands began to check them, muttering balefully to himself meanwhile. Finally he threw down his pencil, and leaned weakly against the desk, shaking his head back and forth in an ironic gesture. There was nothing but despair in his manner. He ran his hand through the crinkly black curls over his ears, and as if it were a painful effort met Killiard's eyes.

"It is the truth," he grated. "Oh, *Madre de Dios!* Why did I not see it before? If I had but had the sense to examine the master tube in action. But I was clogged up with my own scientific dogma—nothing could be wrong with the tube." He groaned, struck his palm. "Now I can perfect the machinery for it is such a little thing. A few

more days is all that will be needed." He stopped.

"Captain," he said humbly, "I am sorry."

Killiard shouted with laughter.

"Sorry!" he cried. "This is a time for celebration. The job is done. In a few more days the ship will be ready—"

He stopped abruptly, and a cold chill passed up and down his spine. There was sorrow, genuine pained sorrow in the scientist's expression. More sorrow than a mere blunder should call for.

"What's wrong?" he said harshly. His fists balled. He took a step forward.

Del Azanto leadenly drew his personal radio-board from an inside pocket. He handed it to Steve with a sick look.

"The news changed while I was on my way over here, Captain Steve. A few more days will be too late. The perfected ship cannot be completed in time."

Killiard snatched the radio-board from him and unfolded it recklessly. This was a Spanish-dominant board, and so the news concerning Elizabeth of Chadres merited a meager headline, which he translated loosely into English.

Killard's heart sank farther than he had ever penetrated in the transmaterio.

Elizabeth's trial was at long last over. Sentence had been passed. She was to die on the state gallows—tomorrow!

CHAPTER XVII

Savage Vengeance

WHEN, after a long moment, during which the walls of the room seemed in danger of suffocating him, Steve Killiard raised his head, his eyes were blurred with rage. The radio-board dropped from his fingers. He turned, walked with unsteady step toward the basement stairway.

Somehow del Azanto leaped in front of him and gripped his arm.

"You can't, Captain," he said huskily. "No matter what you intend to do, rescue Elizabeth, kill Helvina, use the transmaterio, you would be sacrificing your own life. It is not worth it. Heaven knows I would not stop you if there was a chance, if I did not think you had a strong reason for living, stronger even than your love of Elizabeth. There is nothing we can do for her now, nothing! But there is much you can do for your country."

Killiard turned, stumbled across the room and sat down, bracing his sweating forehead in his palms. After awhile, he dragged his head erect, his face haggard. He listlessly sat there, trying to make plans for an uncertain, hopeless future. Del Azanto was right.

Del Azanto's worried eyes were sympathetic. He shook his head.

At that moment, a gong rang. Del Azanto heard it after a second of abstracted thought, and crossed quickly to the visichron cabinet. He flipped the tab.

Killiard jumped to his feet, electrified, as he heard del Azanto's exclamation.

"Helvina!"

Steve was in plain sight of her where she showed on the visichron plate, her image relayed from the English-dominant branch. She favored him with one vacant glance and then turned her attention to del Azanto.

Obviously she could control herself only by an effort. In spite of that, her voice was shrill, her hands were twisting and twining in hysteria.

"The station is down," she reported.

Del Azanto grabbed fiercely at the edge of the board.

"What?" he cried.

"It's true! It must have been down for hours. There's no way to know. Someone, a spy at the station, had access to one of the causacells. It was sliced across the middle. It would have been simple for anyone who had the chance. One of my guards reported it, scarcely a half-minute ago. Now it will take weeks of work to dismantle the machinery and provide a new one. Don't stand there!" Her voice rose as she beat her hands together. "Throw your station into action. You must do it at once."

"But it isn't finished," del Azanto con-

fessed hoarsely.

"Oh, del Azanto!" She uttered the name with the bitterly horrified wail of a child. "You've failed me—failed me!"

At that moment, sounding from a far distance, obviously leaking through from the English-dominant branch, a series of voluminous, rolling concussions sounded.

Through the silence which then followed came Helvina's voice, rapid, deadly, dry, robbed of passion.

"It is Simon," she shrieked. "Simon has come. Now there is only one thing to do, del Azanto. You must speak to your king, at once. You must make him send his fleet, to protect London. And even then we may all perish."

Del Azanto was grabbing at a futile straw.

"The station couldn't be down," he bawled angrily. "It's impossible."

A cool voice now entered the conversation, coming from behind Helvina.

"Miss Osternog is correct, Senor del Azanto," it said. "I, myself, have arranged it. And Simon is here. There is nothing on Earth which can save London now, just as there was nothing on Earth that could have saved Chadres from Helvina's perverted hate."

Steve Killiard saw Helvina turn as Philippe de Paus moved into the sphere of vision. She did not know him as de Paus. She would not have known him, even if his features had not been reconstructed.

DE PAUS had grown a mustache and bleached the dark hair. Furthermore, he was wearing the broad, face-shadowing hat, the trim uniform, of an English Captain of Guards. She did know who he was, however, probably by inference. At least Killiard suspected that was the reason, for she showed no hesitation. Her penta-gun came out, leveled, fired.

The action was too swift to follow completely. Killiard did not know if de Paus had been hit. De Paus returned the fire, however. That much Steve Killiard saw. He must have missed and struck the visichron for the images vanished, and whatever actually occurred was lost to sight forever.

Steve Killiard stood in stunned silence while del Azanto frantically tried to regain the connection. Simon was attacking London! What else could have occurred. Nor was it at all hard to understand how the energetic and clever de Paus had managed to worm himself into a position of trust in decadent London. As captain of the guards he may have had access to the artificial causal-thrust station itself. Once inside, he could have made some slight adjustment which destroyed the wall of force around the pirate time-branch. It might have been hours ago in plenty of time for Simon's fleet to get under way, and come across the branches of time.

Killiard's thoughts worked with a cold clarity. The plot seemed obvious now. Simon and de Paus had escaped flaming Chadres and had made their plans. Simon would stay in his time-branch, gather a fleet together from all corners of his world, and de Paus would go to London, there to insinuate himself into a position which would allow him to render the station inoperative.

Simon would know immediately, of course, that the wall was down. As soon as a time-branch radio in his branch picked up broadcasts from other time-branches, he would know it. And he had been ready.

Del Azanto turned, his face pallid.

"She may be dead," he whispered through bloodless lips. "And it is certain that Simon is attacking London. *Madre de Dios!* I should have known. Simon is loose, free to spread his terror again. If I had but finished the auxiliary station in time—but even then it would have done no good. He needed but a second to make his escape, with his fleet. Well, the least I can do now is to complete the station, and you—"

He suddenly grasped Steve Killiard's hand in both his own.

"You may do as you wish, Captain, and I wish you great luck. And now I must go." His expression was harried, taut. He dropped the American's hand and stumbled away.

The door closed behind him, and Killiard stood in the middle of the floor. A cold clamminess started on the palms of his hands. Del Azanto had his job, and so did Killiard, no matter what tremendous, heart-breaking risks it involved. . . . Elizabeth was in immediate danger, for Simon could not know that she was in Helvina's hands. The transmaterio it would have to be.

Two nerve-racking hours passed before the transmaterio, now acting in its capacity as a time-branch ship, landed in London. Killiard had no way of knowing exactly where he would land in that city, for to set the geographical distance indicators for any exact, given point in a given area required a kind of mathematical computation which consumed hours, even for the most expert of technicians. That was the principal reason why time-branch ships were not used for simple transportation.

As it happened, the ship landed on an avenue that was racked from end to end with livid, fanning disintegrator beams, with tremendous, shocking explosions. Killiard sat in his transparent, gossamer ship, staring with horror at a horizon that was ringed with flame. In plain sight were ruptured, completely demolished buildings, gaping cavities. Dead men, women, and children littered the streets with their shapeless bodies. Overhead, the sky was black with rocketing craft. Now and then, one of those ships plunged downward, trailing furious columns of smoke. One of Helvina's few warships . . . and those which dropped their bombs and raked the city of London with their destroying rays were Simon's. He had come—with a vengeance. . . .

In the midst of this unbelievable, silent carnage, Killiard sat, numbed beyond coherent thought. Those rays or bombs could not touch him or the ship. He was beyond the effects of normal matter.

But where was Elizabeth?

HIS hands shook as he touched at the controls. London would not, could not, stand under this unbelievable assault. An episode was drawing to a close, a decadent civilization was dying . . . and Helvina Osternog could blame none but herself.

Was Helvina alive? Was de Paus alive? Was Elizabeth alive? The thought tortured him. He dropped the ship below the ground, turned its nose and went toward the Hall of Justice, noting his progress in the television plate. When the building swung into full view, a pallor came to his face. The entire leftward wing of the building was blasted, a few steel beams sticking out jaggedly. Smoke was pouring from the remainder of the structure. But even as Killiard looked, this burst into flame.

Fifteen minutes after he had sunk through the surface of that ruined avenue he was beneath the Hall of Justice. He moved smoothly through the walls of dank chambers that must have been hundreds of feet below ground. Now how would he find Elizabeth? Where should he look for her? And what if she was already gone, with de Paus? Or was she dead?

He found the cell blocks after adjusting his television controls. He moved along under the cell corridors, painfully searching each cell, and finding nothing. The wreckage here was beyond belief. Cell doors were twisted off their hinges, brick and mortar, and huge blocks of cement were piled in macabre heaps. If some prisoners had escaped, they had found it hard going.

He found more than he sought, but only after the transmaterio motors had begun to smoke and he knew he would have to solidify the ship above ground before it solidified below.

He found Elizabeth and de Paus!

His muscles went rigid. They were coming down a dark corridor, and coming slowly. De Paus was sagging against Elizabeth. She had her arm around his body, striving to support him, painfully helping him over the rubble that littered the tunnel.

De Paus' right leg dragged uselessly behind him. His sharp dark face was strained in agony. Elizabeth, her hair falling in tattered strands around her

grimed face and in blackened clothing, now stopped for a second, breathing violently.

DE PAUS' lips contorted in a snarl. He shoved Elizabeth away with a savage motion, and fell to the ground. He drew his penta-gun, and looked toward the rear.

At that moment, a whole section of the tunnel fell inward, and Steve Killiard could no longer see them.

He uttered a blasphemous curse. Beneath the floorboards, the heat was baking. In another three or four minutes the ship would materialize. He would have enough time to get to where de Paus and Elizabeth were, anyway. What would happen then, he had no idea. He felt a profound pity for de Paus. He had apparently commanded Elizabeth to go on ahead and leave him.

The ship moved upward, broke the surface of the ground, and then hovered an inch over the ground. The ship dropped that inch as Steve stopped the engines. The interior of the ship was foggy with the smoke of burned insulation.

He slid open the door quickly, stepped out.

"Up with your hands, monsieur," De Paus voice rasped. He was standing against the wall, his penta-gun trained on Killiard. The American obeyed and passed his stony glance to Elizabeth. Her eyes widened in incredulity.

"Steve!"

De Paus' gun-hand wavered. He drooped against the wall, his face falling on his chest. He mumbled something in a drugged tone. The tears started then from Elizabeth's eyes. She started to turn toward the Frenchman when his head came up again. He uttered a violent, soul-searing scream. By sheer effort of will, he came erect, with dazed, blurred eyes staring at a point over Killiard's shoulder.

"Helvina!" de Paus croaked. "You witch! You blackhearted patron of the evil forces. Simon will have your soul now, you who ruined Chadres with your foul hatreds, you who dogged my Elizabeth and took her through tortures that should have been yours."

His weapon roared, jerked, a pale cylinder of flame leaped across the width of the tunnel, lighting the dark planes and hollows of his passion-filled face. Killiard turned toward her who stood in plain view a few feet away, his blood ice in his veins. He turned in time to see de Paus' fire miss her widely and see her own penta-gun release a pencil-thick beam. The beam licked briefly, greedily at de Paus' chest. A broadening hole appeared beneath his heart. The penta-gun slipped from his fingers. In an attempt toward Elizabeth, he pitched forward, twitched, rolled over and lay quite still.

"Philippe." The whispered word of unbelief came from Elizabeth. She stood statuesque, the grime of her face showing up blacker under the paleness that swept her skin. She dropped to her knees, looking at the dead man, her eyes widening with horror as the incontrovertible fact of his death came to her. She slowly raised her head toward Helvina, and simply knelt there, staring.

Pallid-faced, Helvina Osternog stood motionless, a wisp of smoke drifting upward from the penta-gun, as if to testify that time was not standing still. Killiard watched the wisping smoke, and only by an effort raised his eyes until they encountered Helvina's. She was looking down at de Paus and Elizabeth of Chadres. Her face was blackened with the smoke of some holocaust she had passed through. Her robe was partly ripped away from her left shoulder, revealing a shallow gash from which a drop of blood dripped like the steady ticking of a clock.

Far away, sounded the muted thunder of tumbling structures, of falling bombs, of rocketing, destroying ships.

Killiard was able to speak at last.

"London is finished, Helvina," he said.

A section of the tunnel fell inward, and for a long moment, sand, brick and mortar whispered down.

Helvina's tongue crept around her blackened lips. She moved her eyes sideways until her glance fell upon Killiard.

"So are you, Captain Steve Killiard," she muttered. "And so is that Elizabeth. All is finished."

CHAPTER XVIII

A World Branch Vanishes

KILLIARD'S arms hung at his sides. He understood the implication behind Helvina's words. He wondered, briefly, if he could draw his penta-gun in time. Of course, he could not.

"Of what use is it, Helvina?" he asked.

"Of what use is anything, Captain Killiard?" A shudder shook her body. Her shadowed eyes misted suddenly. She bit cruelly at her lip. She swung the gun toward him. Her voice was a shrill, ugly rasp.

"There are hungers that go beyond the need of food," she cried. "I am impelled helplessly along a path that for me is horror. It is cruel—cruel! My soul bears witness that I fight against these urges. I want to rest, and I want to forget the memories that torture me. But memories are devils who mock me."

"They'll mock still more unless you relent," warned Killiard.

Tears began to run down her cheeks. "Relent?" she cried violently. "How can I relent? You do not understand, you who condemn me, who loathe me—you cannot see it. That Elizabeth!"

Elizabeth raised her head. "I have done nothing to you, Helvina," she said.

Helvina's gaunt face contorted.

"Have done nothing to me? You say that who did everything."

Her gun moved in a wild, shuddering arc from Killiard to Elizabeth and back to Killiard.

"Move over there, Captain Steve Killiard."

Killiard slowly moved to Elizabeth's side. His arm touched hers.

A loose bit of plaster fluffed down from the ceiling, clattered on the top of the transmaterio ship. Helvina's head jerked toward it. For a moment she studied the craft. A stricken expression worked at her face.

"DelAzanto also betrayed me," she whispered. "This ship—I see now how you so suddenly arrived, Captain Killiard."

She touched at the smooth bulkheads of the ship with her free hand.

"Yes," she whispered. "Yes, of course."

She turned until her back was facing the entrance to the ship.

Far overhead, the drone of a rocketing ship neared. A series of concussions approached like the measured footsteps of a giant.

Helvina held the gun steady, her eyes narrowing until they were slits. A hollow feeling developed in Killiard's chest. He watched her tensing fingers in fascination, and at what he considered the last moment, moved abruptly in front of Elizabeth.

The next thing he knew, there was confusion and choking dust, a roar of sliding, shattered brick, a shocking, mountainous crash. Killiard was hurled back. He yelled at the top of his voice, turned, and wrapped his arms around Elizabeth, shielding her body from the rain of debris that now showered over them. That lasted for a full minute.

The noise stopped. Choking, Killiard rolled over, wildly unearthed himself and came to his feet. It was pitch dark. No ray of light met his eyes. He stumbled around dazedly, then dropped to his knees, searching for Elizabeth, calling her name.

Her hand found his and he brought her to her feet.

"I'm all right," she said unsteadily. They stood for a moment, tense, waiting. Nothing else fell.

Killiard left her there, felt around with his hands. He came up against a blank, jagged mass. It was the same in other directions. Buried alive. . . .

He groped with that terrorizing thought, hardly daring to breath.

And suddenly, incomprehensibly, a square of light appeared.

Killiard watched it in fascination. The square of light grew brilliant, and he found he was staring through a win-

dow into the interior of the transmaterio. Looking down its length toward the forward section. Helvina Osternog sat there, with her back to him, a tremendous urgency in her manner as her hands played over the controls, the transmaterio controls, and not those of the parallelochron motors.

"Helvina!" cried Killiard.

The word burst from him, an involuntary cry of warning. She could not hear him, of course, and now he did not want her to hear him.

BUT in that moment he knew the answer to a problem that must have been playing around in the back of his mind . . . solving itself without conscious volition on his part.

What would happen if the transmaterio materialized in solid ground?

Suddenly he knew. Del Azanto had told him a chunk of super-dense matter would be formed. The figures of del Azanto's theory had proved that. Proved it? Del Azanto had been wrong in other aspects of his theory.

He was wrong in this.

He watched Helvina, a ghost, ethereal, made of transparent tissue and bones. And he could see her pink heart pulsing in rapid, chaotic beats. She did not know of the flaw in the motors. She could not know. She did not know the motors were already overworked, that in five minutes, ten minutes they would fuse and a catastrophe would occur, beside which Simon's livid attack on London would pale to insignificance!

The transmaterio was now transparent not only to light, but also to normal matter. The heavy rubble which buried the ship, except for that one square of light, now fell downward, through the ship. At the same moment Helvina, still working with the controls, dropped the ship downward, through solid earth, and quietly disappeared.

Killiard raised his eyes and found himself staring at a cavity in the heaps of debris which blockaded the tunnel.

A pale illumination flooded the place where the transmaterio had rested a moment before. In disappearing, a hole had been left and escape no longer was cut off. The trap had ceased to be a trap. Killiard turned, blundering into Elizabeth. She huddled against him, shaking violently.

"Philippe?" she whispered.

Killiard grasped her arm.

"We have to leave Philippe here," he growled. "No time for anything now except to get out. Something's going to happen and I don't know what it will be."

The thought was one he could not foresee. Further words would be useless.

A moment later, he had helped her through the cavity and they were stumbling up the tunnel. Cold terror made him shove Elizabeth along at a breakneck speed. Helvina would meet her fate almost certainly, and if that fate occurred in the manner he expected, it would include him and Elizabeth. They had to escape from this hole, from this tumbling city, from this English time-branch—and quickly!

THE Hall of Justice was falling in black ruin about them. A cloud of choking dust belched out from the tunnel as the ceiling crashed. In despair, Killiard guided Elizabeth into a tunnel that turned left, and fought toward the square of ghost-pale light that showed, seemingly, miles ahead. Elizabeth tripped and fell to her knees. She looked up at Killiard in voiceless pain. With a curse, he scooped her up in his arms.

Simon's pirate ships thundered over the building, releasing their destruction. Steve was struggling up the stairs toward the ground floor when the whole building began to collapse. The walls came together behind him with a gradual motion, which seemed to follow as he struggled wildly upward. It resembled a giant mouth, from which he barely managed to escape.

His lungs were on fire when he reached ground level, flung himself with his burden across the buckling marble floor, and out the entrance. He reached the erupting street, and sagged to his knees, drawing in his breath in great gulping gasps.

Elizabeth, on her knees, tried to stand erect. She sank back with a cry of pain. Her ankle was badly swollen.

A mushroom of fire grew with startling beauty in the street scarcely a half hundred feet distant.

A cylindrical ship, two red and gold beams leaping into life in its nose, hovered momentarily over the appalling ruins of the Hall of Justice. The whole vast pile fluffed into roaring flame. At the same time, a tremendous explosion sounded and the building bulged outward, and then settled into unrecognizable debris.

Killiard gripped Elizabeth's arm.

"Your father doesn't know you're here, of course," he said. "Otherwise he'd ease up a bit."

Anger curled her lips. "No, he would destroy London just the same," she cried. "His revenge on Helvina means more to him than my life or his own. It doesn't matter if I die now."

She turned her head away drearily.

"It matters plenty," Killiard said. "I love you. We're going to get out of here."

Without further comment, he lifted her again, and started down the avenue, his eyes blazing, his chin jutting. It was a hopeless task, of course. Helvina was even then boring her slow way beneath the city. Unknown to her, the engines were slowly capturing molecules of normal matter, converting them into heat, which would melt the armatures. Then the ship would solidify.

In five minutes, in three minutes—any minute, that might happen. All hope seemed gone.

Killiard turned into a side street and huddled against a building to escape a ship that came hurtling downward, demolition rays spouting from its nose. And then Killiard saw something else.

It was a time-branch ship, a small one, placed on a dais at the rear of a residential home. A civilian stood leaning against it, near the open door, his head drooping on his chest. One of his arms had been burned away. Around him, in various grotesque attitudes of death, six other men were lying.

The man raised his gun as Killiard came staggering up.

"Stop," the man commanded.

Killiard stopped, warily. The man looked at him through foggy, fading eyes. He started to buckle. He was making a desperate effort to pull the trigger. He fell soundlessly, in a lifeless heap.

Killiard stood over him.

"Thanks, pal," the American murmured.

Seven men had fought for a ship that would hold three at the most. Six had died, and now the seventh. Such mad attempts to escape Simon's wrath must be occurring all over the doomed city.

Killiard lifted Elizabeth inside with panicky haste, scrambled after her, and with white face, hurried forward to the controls. The parallelochronic motors purred. A moment later—and not a moment too soon—the ship snapped away from Helvina's time-branch.

NOR had Killiard's estimates been wrong. He flipped the tab on the visichron controls, set the rheostat for a full view of London, and tensely watched a silent, catastrophic scene of destruction.

One moment London was there. The next it was not. The ships, the flaming, incredibly rumpled buildings and streets were gone, and were replaced by a white-hot, tortured brilliance that spread from horizon to horizon. Here and there through that brilliance could be seen hurtling chunks of building material and ships with their backs broken. These dissolved into an all-embracing chaos where only solar radiance flared.

Killiard watched in horror and fascination.

A bomb, bursting with energies almost beyond imagination, had exploded.

Helvina's transmaterio, boring its way deep beneath her city, had solidified.

As if turned to stone Steve Killiard sat watching the raging volcano that had hurled London, and perhaps all of England, upward into the stratosphere. Helvina Osternog was dead. Dead? Scattered, tattered into free electrons, all the

passions, all the impulses that had driven her along her tortuous path, were gone, dissipated as if they had never existed. He closed his eyes in pain, and her face grew in his mind. Her child-selfish lips, her dark, shadowed eyes, shadowed with the fears, and the imaginary and real horrors, of a child.

He opened his eyes wearily and reached out slowly toward the instrument board. He touched a key and the television plate went blank.

"Steve," said Elizabeth.

With difficulty he thrust useless regrets to one side, for he recognized in Elizabeth's voice something that was not good. He turned. She was holding onto the chair, standing on one leg. Her face was dead white, and her greenish eyes stared at him accusingly.

"My father is dead!"

Killiard winced.

"I'm afraid so, Elizabeth."

"You killed him," she whispered. She began to pant. Her body shook with sobs. "You killed Helvina. You killed Philippe—my Philippe. You destroyed Chadres. You destroyed London and England and Helvina. Everywhere you went there was death."

He arose, feeling as if the world were coming to an end. "You don't know what you're saying, Elizabeth."

She flinched back.

"Don't you dare touch me. It's true." She hung onto the chair, whimpering. "Everything is gone—ruined. You should have let me die, too. You shouldn't ever have bothered us."

"So I bothered you." Red spots of anger appeared on Killiard's cheeks. His voice grew harsh. "If I recall correctly, and stop me if I'm wrong, I was minding my own business in my own time-branch when you took it into your head to get a slave to do your dirty work. A slave you could make fall in love with you so your precious Philippe could polish him off for gun practice."

"That's not true," she choked.

"It's true all right," he insisted coldly. "How I ever had the bad sense to let myself fall in love with you I'll never know." He was whipped to white-hot fury by her reproaches. "Bad blood runs in your veins—the blood of Simon—and the blood of Helvina. I've freed you now, but all I've done was to let some of Simon and some of Helvina loose in the world again."

Her face went white as death. He stopped, suddenly appalled by where his tongue had led him. Now it was too late to retract that flood of insult.

"Elizabeth," he began, remorsefully.

She faced him in sudden fury.

"I hate you!" she screamed. She let go of her support, and hopped toward him on one leg and clawed at his face with her sharp fingers. Killiard cursed, pulled her hands down, and pinned them to her sides, his face a scant fraction from hers, so close he felt her hot, panting breath. Then he released her.

She weaved on her good foot, her eyes dazed, bewildered. A long sob shook her. She emitted a tired, exhausted sigh and began to sag. Killiard caught her as she fainted.

He carried her back to the only bunk the ship accommodated and piled every blanket he could find on her cold body. Then he dropped to his knees, numbly watching her slowly falling and rising shoulders as she breathed. She had gone through too much. She had endured long weeks of a nerve-sapped trial, during which cruel accusations had been hurled at her. The miracle was that she had lived through it. To top it off, there was the death of her father, of Philippe, the destruction of London, the obliteration of an entire time-branch. She was suffering from shock and the sooner she had medical attention the better. But he knew that he had lost her, and in losing her, lost everything.

He arose, and turned the ship toward the Spanish-dominant branch.

CHAPTER XIX

A City by Name of Tokio

NUMBLY, Steve Killiard sat in del Azanto's laboratory, waiting for

the scientist. Scarcely an hour ago, he had landed the ship in the depot at the heart of Madrid, had bundled Elizabeth off to the nearest hospital. Then he had come here to consult with del Azanto. Del Azanto had just completed work on the auxiliary artificial causal-thrust unit. The French-dominant branch still harbored a pirate race, but it was sealed up again, this time for good. Del Azanto evaded any questions concerning London, but it was evident that news had seeped through. Del Azanto had promised to come at once.

A crooked, bitter smile had settled permanently into Steve Killiard's face, but he was relaxed now, although tired.

Outside, on the walks, the fields between the buildings of the University of Madrid, were aglow with warm, peaceful sunshine. He could hear footsteps and the gay untroubled laughter of students, the lilting voice of a *muchacha* and the barking of a dog. To him it seemed as if a door had been opened in his mind at long last, permitting the normal, casual events of life to enter once more. These sounds also existed in his own time-branch. Well, he would be back there, soon, with a gift for certain little yellow men.

Del Azanto came in, his glance passing over the room until it rested on Steve Killiard. He grasped the American's hand warmly.

"Elizabeth?" inquired the Spaniard.

Steve Killiard nodded and shrugged.

"Shock and a bunged-up ankle," he explained. "I gave her what first aid I could. Upon landing at the depot, down in the valley, I sent her off to one of your hospitals. She'll be all right." He looked studiously at the toe of his shoe. "I was thinking of asking her to go back with me, but—" He stopped, his voice choking.

Del Azanto motioned him back to the chair and then sat down himself.

"Tell me what happened," he suggested.

Killiard told him the story.

"De Paus miscalculated, I guess," he then said. "De Paus figured on getting Elizabeth out before Simon attacked. I suppose he intended to use Helvina as a hostage and went up to her rooms. He could get in as an officer. They shot it out. De Paus' fire jimmied the visichron set—you remember when the plate went blank—and she missed him, or maybe hit his leg. He forced her to escort him to the Hall of Justice. Simon attacked about then. As I figure it, Helvina and de Paus were separated. Elizabeth maybe broke free herself when her cell door was thrown off its hinges, and later she ran into de Paus. But he was in a pretty bad condition with that leg for she was helping him along when I first saw them. De Paus apparently knew Helvina was behind them somewhere."

Killiard made doodling marks with his finger on the arm of the chair, his tired eyes following the imaginary lines.

"Helvina precipitated her own end. I think I would have told her not to use the transmaterio if I'd have had the chance. Well, maybe it was better that way."

"Perhaps it was," del Azanto agreed. "But one can't help feeling sorry for her."

"No, one can't."

Del Azanto leaned forward, his eyes sparkling with interest.

"Why did the transmaterio explode though? My figures definitely showed if the ship solidfied below solid ground it would simply stay there, and that would be the end of it."

STEVE KILLIARD grinned at him until del Azanto turned red.

"Your theory was slightly haywire before, and I put my finger on the flaw," the American reminded him. "You went off the deep end on this other business—the transmaterio would not simply stay there. Not by a barrel and a half of apples."

Del Azanto squirmed abashedly, but he conceded the point.

"I didn't accept your explanation of what would happen," Killiard went on. "I mulled it over, trying to find that flaw, too. I understood it pretty perfectly when Helvina took over the trans-

materio with the idea of making her escape, and to blazes with us. Which is the reason I thought it would be a pretty good idea if Elizabeth and I pulled out of that time-branch pretty darned quick.

"Explantion's simple, though, del Azanto. In general, objects expand when heat is applied. The heat gives the molecules more energy, they swing into longer orbits, and need more room to get around.

"Stick a red-hot piece of metal into a pan of water. The water explodes—into steam. The molecules jump into terrific speed, hitting other molecules and making them move at the same speed.

"An explosion, of course, is merely an instantaneous expansion. That's what happened to London."

"And half of England," del Azanto interposed grimly. "I read it on the latest radio-board."

Steve Killiard elevated his eyes and whistled.

"Worse than I thought it was, then," he said. "Anyway, you can figure what would happen when two objects suddenly find themselves in the same space. Billions of molecules, blissfully sailing along and minding their own business, having just exactly the right amount of space to move in, would suddenly find themselves cramped for room by an equal number of molecules. In London they needed room, and they needed it in a hurry. Immediately a war, bombardment that can't be imagined or equaled for pure viciousness, started up between those two groups of molecules."

"But my figures definitely showed—" began del Azanto in chagrin.

"Revise your figures," Killiard advised. "This is what happened. Matter can't be compressed despite what your figures say. It can't be compressed without plenty of pressure. You need about a million pounds of pressure to compress water a fraction of a fraction of an inch. If the molecules of a certain element are at a certain temperature, they'll move at a certain speed. They have to move at that speed, and they have to have exactly the amount of room they have to get around in. When it suddenly turns out that they haven't got that room, they have to make room, no matter what the cost.

"Of course," the American added hastily, "I'm no scientist, you have more on the ball there than I—"

Del Azanto waved his hand to shut him up.

"Continue," he snapped pettishly. "I am merely annoyed for not having taken that line of research before. The flaw in my figures is already apparent. Go on."

Killiard shrugged. "Not much more to say. Two solid objects occupied the same space. Both having their own static temperatures, the molecules of both objects had to retain their speed and their area of motion. There was only one way to get it—to fight for it. To shove out of their way any molecules that might impede them. Billions, trillions of molecules shoved to right and left, upward and down. They didn't take much time about it, either. All that happened in a fractional second. The two objects expanded instantly, forcefully. Result: A sudden, inconceivable explosion that blew half of England off the map."

Del Azanto smiled after awhile.

"It is the truth," he said soberly. "I should have seen it. And of course, the explosion caught Simon and his fleet, too. So now I suppose there isn't much more to do."

"No," Killiard agreed, "there isn't."

Del Azanto reached forward, and laid a quiet hand on the American's knee.

"What are your plans now? You've accomplished enough for an army of men since that day Simon picked you up from your own time-branch. There's no longer anything to keep you here."

Killiard passed his glance to the sunlit windows, studying the rolling fields with a vacant part of his mind.

"I'll be going back, of course," he said after awhile. "As soon as I can, with the completed and perfected transmaterio, and some plans for some of these fancy weapons you have here, if you'll let me. Also I'd like to take along plans for more transmaterios, too.' '

THEN the American leaned forward, excitement in his manner.

"What happened to London can happen to other cities," he said. "I'm thinking about a particular city—a city by the name of Tokio. You see?"

Del Azanto saw. His nostrils flared.

"You can't do that, Captain," he rapped out. "You're mad!"

"Maybe I am. But I don't think so. I've lost Elizabeth. She thinks I'm the lowest scum. And maybe her reasons are good. I've balled up her life plenty. So now I figure on going out in a blaze of glory. I'll leave the plans for the machine with someone who'll understand their value. I'll drive the transmaterio under Tokio, neutralize the controls. and materialize the ship."

He snapped his fingers and added slowly:

"Blam!"

Two weeks later, the two men were gripping hands in farewell. Steve Killiard stood with one foot in the door of the new, perfected transmaterio, trying to say good-bye. And it was hard.

Del Azanto spoke to him gravely.

"You will be back again sometime, Captain," he predicted. "That will be after this war, which surely cannot last long now. I do not believe it will be necessary for you to die. Your civilization will grow even greater than it is when it learns of the innumerable worlds which surround it. A time of prosperity and peace will come. And then I will see you again."

Steve Killiard released his hand.

"We'll win," he said. "But I won't be alive to know it."

The scientist's dark eyes danced, an enigmatic smile tugging at his lips.

"*Adios*, Captain Steve," he said softly; and Steve slid the door shut with a brief, "So long," in return.

He stood against the door for a moment, and closed his eyes in pain. He would never see Elizabeth again. . . .

He moved with lagging steps forward, plopped down into the control chair. He listlessly set several keys, using the distance, geographical, and statochron charts del Azanto had prepared for him.

In the ports, a grey fogginess swirled as the ship launched itself onto a dimensionless ocean. The ship, working on its time-branch controls, would land in Washington, D. C. He had wanted to return to Australia, to his base, but certain considerations prevented. That island might have fallen from Allied control. . . .

He sat for an hour with his chin cupped in one palm, his eyes staring sightlessly into nothing, remembering.

There was a footstep behind.

He turned immediately, but without alarm. He suddenly knew what he would see. Through his mind, in that split second, passed a memory of del Azanto's dancing eyes, and his insistence that Killiard would be back.

"Elizabeth," he said hollowly.

She came forward into the circle of light.

"Yes, Steve," she said simply.

They stood within touching distance, but they did not move. He eagerly scrutinized the sweet, relaxed lines of her face—but it was a face that had changed. The barbarian wilfullness that had been Elizabeth of Chadres' was replaced by a haunting, quiet sadness that made him think sharply of Helvina Osternog. Strange, that now, for the first time, he could note a resemblance.

"Del Azanto told me what you intended to do," she said.

"You came for that reason?"

"No. I intended to come with you, if you wanted me."

"But you said—"

"I've said many things which were unkind. And I have thought many things that were wrong. I want you now, Steve, terribly, because I do love you. And we must go back to your time-branch together, for now your people seem real to me."

He might have been listening to a funeral dirge which suddenly changed to a swelling, joyous song. He took her hands quickly.

"Real, Elizabeth?" he said huskily. "I wanted to hear that. Because if you really believe that, then nothing else matters."

SHE nodded emphatically, and came closer to him.

"Your people suffer, Steve. They suffer greatly. And I have learned what suffering can mean. Philippe is dead and it is better that he is dead. And my father is dead, and it is better that he is dead, for he was a cruel, angry man without a conscience, although I loved him dearly." She bit her lip. She quickly lowered her eyes. "And I have been selfish—sometimes—but not bad, Steve."

Killiard tipped her face up, gently.

"I didn't mean that, Elizabeth, of course," he said.

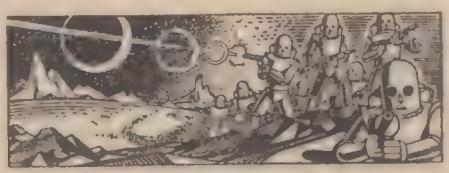
She smiled gloriously, and he kissed her.

At first softly, and then fiercely, and his heart was beating in fast tempo, sending new, warm blood, new life through his veins. Run a transmaterio under Tokio—or Berlin—and wipe out a nest of pirates as he had wiped out a nest of pirates in another time-branch? Certainly.

Now his plans unfolded and blossomed like the petals of a morning flower under the rays of a rising sun. He saw a fleet of transmaterios, boring along through solid earth—automatically—and radio-controlled. He was going home, and Elizabeth was going with him, and the war would be over, soon. There would be prosperity and peace, as del Azanto had said.

Elizabeth of Chadres released herself after awhile, and pressed her head against his chest. She sighed with tired contentment.

"I am going to like America, Steve," she said.



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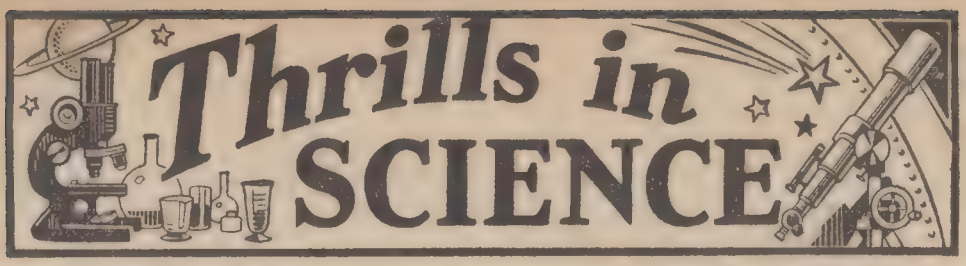


Thumbnail Sketches of Great Men and Achievements

By OSCAR J. FRIEND

THE STORY OF ELECTRIC TRACTION

I. THE GENERATOR

"Mike" Discovers How to Cut an Electrical Current

WHEN you dive madly down the stairs to leap in through the automatically closing doors of a subway coach, when you board a surface trolley car, or enter an air-conditioned, electrified railway train, do you ever stop to wonder just how these transportation conveniences came about?

Probably not. There is so much to remember and so many new developments pushing aside the old, that we easily fall into the habit of taking familiar things for granted. Therefore, it is the purpose of this sketch to tell you the story of a boy named Mike.

There are literally hundreds of Mikes and Toms and Joes whose composite or collaborative efforts have gone into the creation and production of any solid invention from an abstract idea, so many that it is difficult to determine to which boy belongs the particular credit for what.

Nevertheless, history accredits this nineteenth century Mike with the invention of the electric generator.

Mike's father was a blacksmith in Surrey County, England, when Mike was born on September 22, 1791.

Mike, himself, began his business career as a book binder's apprentice in London during the first decade of the nineteenth century. Not a very auspicious start for a scientist, was it? But there was one priceless advantage to his job. Instead of treating the flood of books that passed through his hands as a humdrum and commonplace sort of drudgery, Mike recognized them as individuals, as separate entities, some brilliant, some mediocre.

The point is that he began to read, and then to study, them.

It made little difference what the subject matter was, so long as it offered knowledge, information, theories and facts. Chemistry, physics, and then the comparatively new subject of electricity came to his attention.

He applied himself with such avidity that a customer of his employer became interested in the lad. With the result that he one day gave Mike tickets to a series of lectures given by the great Sir Humphrey Davy in February, March and April of 1812.

What happened? Mike went to the lectures, took copious notes, and then, on fire with enthusiasm, transcribed and expanded the notes into full papers on the subject and sent them to Sir Humphrey.

The result was that the eminent scientist hired the young man as his assistant for laboratory work at twenty-five shillings per week.

This association with Sir Humphrey Davy proved invaluable to the budding young scientist. Mike's early experiments were chemical in nature, but he soon gravitated into the electrical field about which so little was really known and where great minds were still groping somewhat blindly.

His first experiment was a combination of chemistry and electricity when he constructed a voltaic pile with seven halfpence, seven disks of sheet zinc, and six pieces of paper moistened with salt water.

From this he went on to the new discovery of the production of the continuous rotation of magnets and of wires conducting the electric current around each other. Although other great experimenters reached this point, the understanding of why this rotation was so remained a scientific puzzle until Mike went to work on it. Up to his experiments no man had been able to make a magnet revolve on its own axis.

Shorn of its technical details, on one hand the electric current always formed a closed circuit; on the other, the two poles of the magnet have equal but opposite properties, and are inseparably connected, so that whatever tendency there is for one pole to circulate around the current in one direction is opposed by the equal tendency of the other pole to go around the other way.

Thus, one pole can neither drag the other around and around the wire nor yet leave it behind.

It was in August, 1831, that Mike was about ready to admit his defeat in this particular experiment. He had already attempted to obtain an electric current by means of a magnet, and on three occasions he had attempted to produce a current in one wire by means of a current in another wire, or by a magnet.

He was hot on the trail of induction of electric current—but he couldn't spin a magnet on its own axis!

That August night he was particularly low in spirits as he talked things over with his sympathetic wife.

"You see, my dear," he concluded in exasperation, "I have no guide, no text-book, no tutor to go by. All of this is new theory to everybody. Perhaps I am striving to accomplish the impossible, but it seems to me that it should work. If I could only break the deadlock of the opposing poles of a magnet, just think of the possible power I could develop!"

"You—mean—like perpetual motion, darling?" asked his wife hesitantly, marking the spot where she had been reading in the Bible.

"No, not at all," replied Mike, smiling, but his entire face alive with the animation that was ever a characteristic of him. "I don't mean to bring something out of nothing. I think it is possible to convert electric energy into power if I can only find the secret. If I could only cut—even temporarily—the—the line of force which holds one pole against the other, I could spin my magnet."

"Cut the line of force," repeated his wife musingly.

"Yes. If I could evolve some sort of circuit breaker that would click on and off momentarily so the negative pole of the magnet could jump the gap."

"That's funny," said his wife, looking back at the book in her lap. "I was just reading here how Cyrus caused his army to pass dryshod over the Gyndes by diverting the river into a channel cut for it in his rear. Could you cut another channel for your flow of electricity? I mean—I know it sounds silly, but what I mean to say—"

"Don't say it!" cried Mike, jumping to his feet and running his fingers in agitation through his hair. "Let me think! Let me think! You have given me an idea, my dear!"

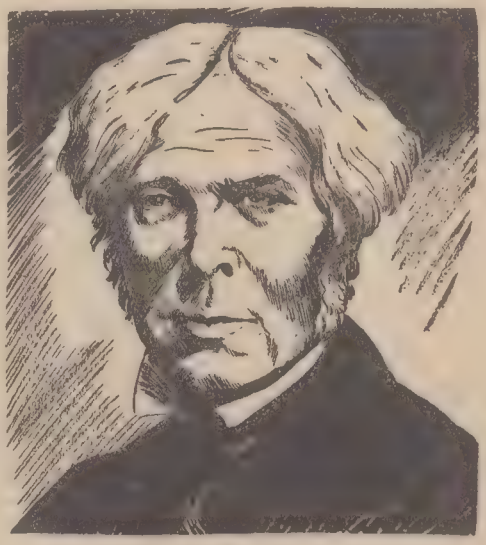
That the thought was prodding him unmercifully was evinced in the fact that he ran out of the room and hastened to his laboratory.

For nine days Mike feverishly applied himself to a brand new experiment. He scarcely found time for food and sleep. His wife became alarmed. And then, just as she was on the verge of calling a physician, Mike invited her into the laboratory.

Proudly he pointed to the crude little contraption on the table and then, as she stared at it in perplexity, he connected a couple of wires and gave the magnet a little flip on its axis with his finger. The silk-and-wire-wound gadget revolved—and continued to spin on its axis! Mike had at last succeeded in his ten-year-long search.

"You are responsible for that, my dear!" he told his wife. "That story of Cyrus gave me the clue. I caused the current, in some part of its course, to run in two parallel channels, one on each side of the magnet, in such a way that during the revolution of the magnet the current is transferred from the channel in front to the channel behind—and the middle of the magnet passes across the current without stopping it."

And, thanks to the story of Cyrus and the Gyndes River, Mike had solved the problem of the magnetic deadlock. He went on to develop and study his discovery, calling these currents "lines of force" and proving that by cutting them—whether of artificial magnet or of Earth—induced currents were generated. Causing a copper disk to spin thus across Earth's lines of force, Mike had produced such currents.



The Father of the Electrical Generator

He had built the forefather of a machine to garner the electric force of Earth itself.

Today, honored for many electric inventions and the propounding of many electric laws, Mike is particularly revered for the invention of this instrument to gather up electric energy from the very field of Earth itself and transmit it for use in thousands of ways, of which the electrified railway system is only one.

To the electrical world Mike is known as Michael Faraday, the father of the electric generator.

2. ALTERNATING CURRENT

Nikola Tesla Repairs a Motor—and Makes History!

"NIKKI," said the youth's father somewhat impatiently, "your trouble is that you alternate too much. You can't make up your mind what you want to do. You've been to three famous schools and have studied half a dozen subjects, from physics to this new business of electricity."

"But it isn't new, Father," answered the young man eagerly. "Electricity has been here on Earth longer than man; it just hasn't been discovered and put to work until after Benjamin Franklin—"

"Benjamin Franklin!" snorted his father in interruption. "That—that American tinkerer! What I want to know is what you are going to do with your life. You cannot go through it alternating from one thing to another."

"You are right, sir," replied the slender, gawky and rather rawboned youth. "Right now I am going to accept that job the Austrian Government has offered me in the telegraph engineering department. Later—some day—I—"

"You what?" demanded the old man.

"I shall go to America," said Nikki very firmly.

"Bah!" said the father. "Croatia is the finest place in the world. Get those foolish ideas out of your head. But first decide what will be your life work."

"I have chosen, Father," said the young man. "I will alternate no more. Electricity is my choice."

In making this statement Nikki was both right and wrong.

He alternated between professions never again, but he became famous for another kind of alternation.

Never dreaming what was in store for him, he applied himself to his work, saving what money he could against the time that he would travel to America.

He rose rapidly in his chosen field, going to Budapest and then to Paris to engage in electrical engineering. He studied the works of Humphrey Davy, Faraday, Joseph Henry, and dozens of others—and always he shook his head at the clumsiness and unwieldly properties of electrical currents.

Direct current and batteries there were in plenty, but the giant that was electricity was not yet harnessed to the work of man. If only there were some way to increase and utilize this potential power.

It was one day in 1884 that Nikki's greatest opportunity befell him. It didn't seem such an auspicious day. True, he had just landed in America at the New York Battery, and that was enough to make him feel good, but he spoke poor English, he was not yet a citizen of this wonderful country, and he was jobless and alone.

He was walking in a rather bewildered fashion up Broadway, armed with only four cents in his pocket.

He was twenty-eight years old, in a strange land—and the words of his father came back to him:

"What are you going to do with your life? You can't go through it alternating from one thing to another."

While he was contemplating on this subject he noticed a gang of workmen clustered around a piece of metal apparatus. They seemed to be in a quandary, and had bits of wire and parts scattered all about them in disorder.

Nikki recognized the machinery at once. It was a direct-current electric motor. Instantly interested, Nikki halted and watched proceedings. It wasn't five minutes before he realized that the baffled workers didn't know what to do.

They were trying to repair the motor, and some secret fault or break-down completely eluded them.

"Here," said Nikki at last in his accented English. "Let me show you just what is wrong."

"Huh?" grunted the foreman on the job, glancing up contemptuously. "You think you know anything about electricity, bud?"

"Yes," said Nikki simply. "I know what is wrong with that motor."

"Oh, yeah?" drawled the foreman, winking at his crew and the other stand-bys. "I'll give you twenty dollars if you can fix it."

For response Nikki instantly peeled out of his coat and, reckless of the only suit he possessed to his name, he knelt down and laid his hands on the dismantled motor.

"You have hired a man," was all he said.

That was enough. By lunchtime the workers had become entirely respectful and were calling Nikki by his first name. By the time the motor was repaired, reassembled and running they were listening as at the feet of a master.

"This is, indeed, such a waste of energy," said Nikki, sighing. "If only I could discover a way to split—or—or alternate the current, motors like this could be wound and built to do twice the work."

"Eh? What's that you say?" spoke up a gentleman, obviously on the deaf side, who had been watching the slender young foreigner's work for the past hour with the keenest interest.

Nikki looked up and repeated his remark in a louder voice.

The other nodded in critical agreement and then hastily scribbled an address on a card he took from his pocket.

NIKOLA TESLA

"Here," he said. "Come over to my laboratory at Orange tomorrow. I want to talk with you. I have a job for you."

Nikki accepted the card and stared after the man's back in amazement.

"Who is that man?" he asked the somewhat awed foreman on the motor job.

"Don't you know?" said the foreman. "That—that was Thomas Edison."

Happy day, this meeting of two of the greatest electrical wizards of the nineteenth and twentieth centuries. Thanks to the impetus given him by the wizard of Menlo Park, Nikki became a naturalized American and delved deeper into the intricacies of a force soon to become known throughout the world as the alternating current.

In 1888 Nikki patented the induction motor, by means of which electrical energy might be converted into mechanical energy more effectively and economically than by the direct current.

From that day to his death early in 1943,

Nikola Tesla invented and patented 900 other devices, all of them important in the field of electrficity.

From Faraday to Tesla was a long jump, with the contributions of scores of brilliant electrical researchers to be added between—and since—but electric power, with Nikola Tesla, grew to manhood and was ready to go to work for humanity. The day of the electric era had truly dawned.

3. ELECTRIC TRACTION

How Tom Davenport Built the First Electric Train

AMID a babble of interested childish talk and laughter the man in the sweaty undershirt and split leather apron cupped his huge and grimy hands about the flaring match and held the flame to the alcohol wick beneath the tiny boiler.

"Jest as soon as the water gits to bilin', younkers," he said in his booming bass voice, "the piston will start pumpin'. Then I'll show ye how a steam-engine-operated factory works."

He was a brawny man with a mane of black hair, this middle-aged blacksmith of Vermont. Noted for miles around the little town of Brandon as the best blacksmith in these parts and a general tinker who could repair almost anything, Tom Davenport had a great weakness. He loved children.

He was always neglecting his work to mend a toy or build some sort of silly contrivance to please and entertain little folks.

Just now he had completed an entire little saw-mill, complete with wooden circular saws, planers, conveyors, and jointed little men of wood, all connected together in one mechanically functioning whole by little wooden shafts and pulleys and gear wheels. The belts were of string. And the whole contraption was joined to the pulley wheel on the flywheel of the toy steam engine with a piece of string.

Quite an artist in his way, this hulking Tom Davenport who smelled of leather and iron and horse, and had broken fingernails. But his eyes had kindly crinkles about them, and his heart was as young and gay as that of the smallest of his intent audience of village children.

"Ye mean, Master Davenport," piped up a little tyke with curly hair, "that the steam from that little engine ye made is gonna *run* all these things?"

"I do that, younker," promised the blacksmith. "Jest ye watch and see."

In a little while the water was boiling and the steam was whistling from the stack of the tiny engine. Davenport adjusted his gauge with blunt but delicate fingers, gave the flywheel an experimental flip, and the steam engine was puffing away, the single cylinder working smoothly, driving the balanced wheel which Davenport had salvaged from an old grandfather clock. In a moment the tiny figures of the miniature saw-mill were industriously at work.

The children clapped their hands and squealed with delight. The village blacksmith had created another marvelous toy. Davenport stood back and stared with pride from his audience to the mechanical toy his skill had wrought.

Then he started guiltily as the voice of his wife called shrilly from the porch of the house beyond the shed of the smithy.

"Tom! Tom Davenport! Stop your foolishness and shoe that brown mare of Dr. Martin's. D'ye hear me, Tom Davenport?"

The blacksmith spread his hands helplessly at the children and shooed them out of the smithy.

"Come back tomorrey, younkers," he said. "Mebbe there'll be no horses to shoe then."

That evening after supper his wife took him to task severely about frittering away his time building senseless toys for children.

"Ye'll never make any money, Tom," she complained bitterly. "What good is a toy steam engine and a saw-mill? The country's full of real ones."

But tonight Davenport didn't pay much heed to his wife's nagging. He was intently reading an article in the Montpelier newspaper. Mrs. Davenport repeated her remark with greater vehemence, and Tom looked up from his reading, his eyes aglow.

"Mebbe ye're right there, old girl," he agreed mildly and without argument. "So I'll jest build me something the woods ain't full of. I'll show ye a brand-new kind of power around these parts."

"Fiddlesticks!" said Mrs. Davenport. "What on earth are ye talkin' about?"

"Electricity!" exclaimed the blacksmith, his eyes already filling that far-off and dreamy expression his wife knew so well. "Here's an account of one of them newfangled electromagnets and a motor made by two fellers, Faraday in England, and Henry down in Albany, New York. By gum, if they can do it, so can I! I'm agoin' to make electricity, old woman."

"Tom Davenport!" cried his wife quickly. "Don't ye dare waste any more time or money on foolishness. Give me that paper."

But Mrs. Davenport's remonstrance was without avail. On his next trip to Montpelier Tom Davenport, consulting his newspaper article, bought all the parts for the manufacture of his electromagnet and a battery that he could find, and then recklessly ordered the rest to be mail-ordered and sent to him. It was with a guilty feeling that he stole time out from his labors now and sat in the shade of the old elm tree that sheltered his smithy and read papers on electricity he but half-understood and drew plans and figured designs that no one else could have interpreted.

Nevertheless, as the days sped by, Tom Davenport, the simple Vermont blacksmith, taught himself the fundamentals of electromagnetism and persevered until he finally had constructed an electromagnetic motor along Faraday's and Joseph Henry's principles that would work on the current furnished by his home-made battery.

This was a wonderful day in the blacksmith's life, but his gaze fell upon the silent and motionless little figures of the steam-operated toy saw-mill, and certain words of

his wife came back to him. Wasting time and money on foolishness.

Of what use was a magnetic motor run by electricity if it wasn't put to work? It wasn't even as useful a toy as the steam-powered saw-mill he had built.

"By gum, I'll put it to work!" he vowed angrily. "I'll make it do something useful!"

He fell to work planning a queer-looking set of wooden gears which he whittled out and mounted on a four-wheeled toy vehicle he made. Then he carefully fitted and geared his home-made little motor to these parts which connected with the rear axle of his toy vehicle. Then he fitted the rather bulky and weak battery on the bed of his queer wagon.

By this time he had both his wife and the neighbors' children intensely interested in what he was doing. Scratching his bushy head and surveying his work, he pursed his lips in a soundless whistle as he proceeded to build a complete circle of track for his new gadget. At last he was ready.

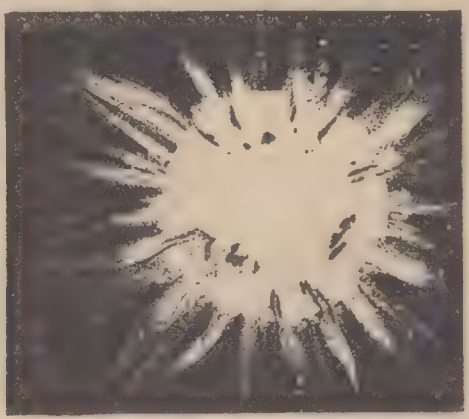
He called in his friends, and neighbors and placed his vehicle on the circular track. Then he connected the battery by wires to his motor.

There was a little hum—which he helped along with a little push—and the single-coach train began to move along the curving track rails. It picked up speed and continued to run.

An electric motor was the driving force for the first time in the history of the world!

Up there in the Green Mountains of Vermont in 1835, many years before the combined efforts of mechanical and inventive geniuses were to achieve the air-conditioned, electrified train which would collect its driving energy from a guarded third rail, Thomas Davenport, building almost every part with his own hands, pointed the way by building the world's first electric train. There would now be no holding back the dawn of electric power.

The age of electric traction was opening before mankind.



Steve Bennion, electronic engineer, starts an experiment he can't finish—and faces the peril of atomic fire in

The GIANT *Atom*

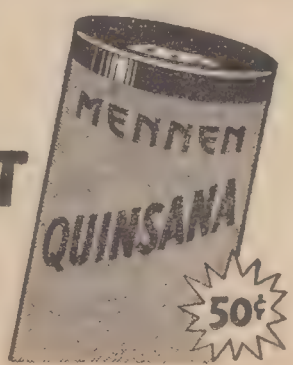
in the astonishing complete novel of that name

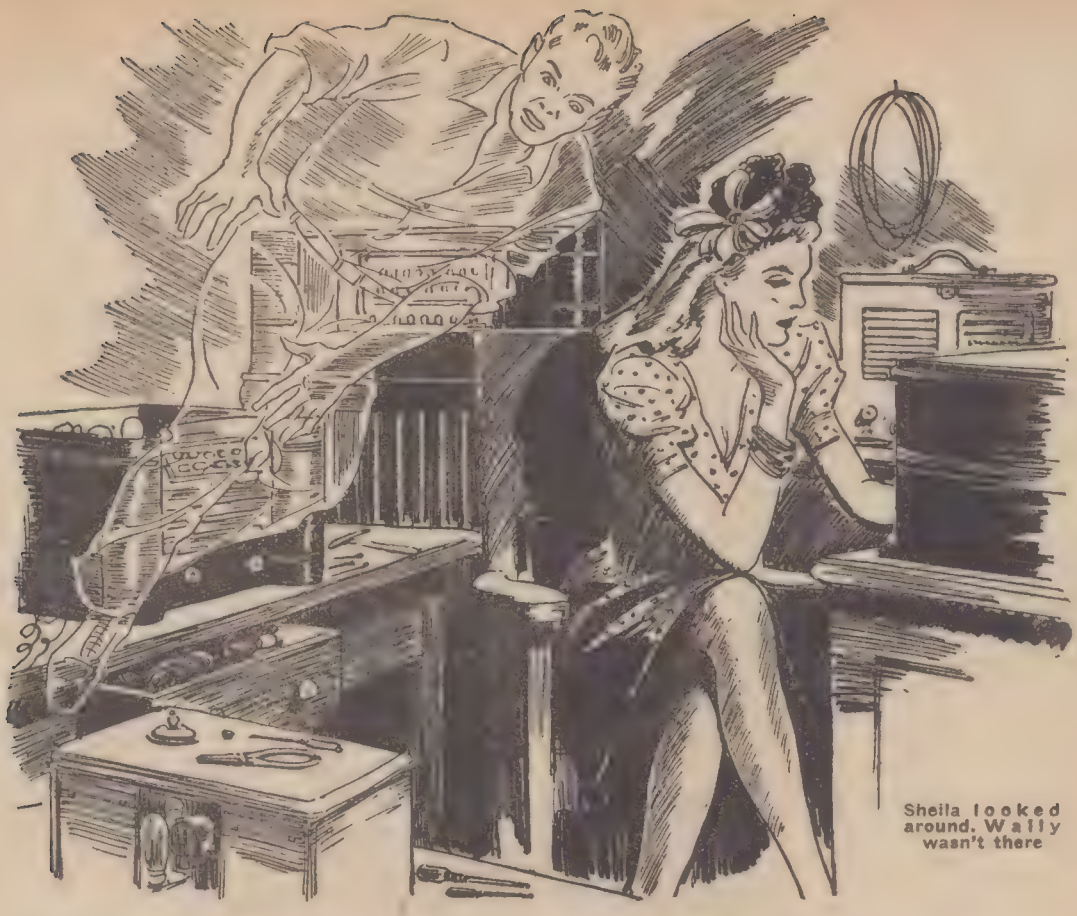
By MALCOLM JAMESON

COMING NEXT ISSUE

NEW SUCCESS OVER ATHLETE'S FOOT

NEW SCIENTIFIC 2-WAY TREATMENT WITH **QUINSANA** POWDER -ON FEET AND IN SHOES - IS PRODUCING AMAZING RESULTS. IN TESTS ON THOUSANDS OF PERSONS, PRACTICALLY ALL CASES OF ATHLETE'S FOOT CLEARED UP IN A SHORT TIME.





Sheila looked around. Wally wasn't there

The Monkey and the Typewriter

By WILLIAM MORRISON

Wallie Bingley Knew What He Was Trying to Do—but Nobody Could Foresee the Amazing Results That He Was Going to Get!

WALLACE BINGLEY neatly peeled the insulation off the end of a length of copper wire, twisted the metal into a slender hook, and clamped down upon this hook with a small steel screw. Sheila Vane, watching scornfully, could not keep an expression of interest from forming on her pert and pretty features. Wallace Bingley noticed the expression, and pretended he didn't. He threw a switch, then pressed the button of a galvanometer.

There was an impressive pause.

"Well?" asked Sheila.

Bingley had his eyes on the galvanometer needle, which didn't move.

"Nothing. I've failed again," he said glumly.

The expression of interest on the girl's face died away to be replaced by an even more intense look of scorn. "I

might have expected that. You've got about as much chance of success as a—a monkey on a typewriter."

Bingley glanced absently around. He was surrounded by radios which owners had brought in to the shop to be repaired, in the absurd belief that the sign that read RADIO REPAIRS actually meant what it said. From one of these radios he removed a vacuum tube, tested it, and found it good. This he calmly inserted into his queer hookup.

"What's that about a monkey?" he asked absently.

"Somebody had a scheme once for producing great literature without too much effort. The idea was to put a lot of monkeys in front of typewriters, and let them pound away for eight hours every day. If they worked long enough, they'd eventually hit every possible combination of letters on their typewriters."

"What was the idea?" asked Bingley.

"It meant that in the long run they'd turn out everything from Homer to Shakespeare."

The radio which had already yielded a vacuum tube now yielded a condenser. Bingley frowned at it, but used it.

"I've read stuff that must have been turned out that way," he commented. "So what?"

"The only trouble is that these monkeys won't get results in less than a couple of million years. Whereas, *You,*" she observed pointedly, "have only one lifetime to live."

Wallace Bingley grinned. "I'm working with a little more sense than those monkeys. There's a theory behind what I'm doing. Every object, whether it's part of a radio set or not, emits radio waves. The difficulty lies in detecting them, and I'm on my way to doing that now. When I succeed—well, then I'll be able to tune in on objects anywhere, with a one-way radio. It'll be the most sensational thing since the discovery of fire."

Sheila Vane regarded him glumly. "The world is full of all sorts of charming, intelligent people," she mourned. "And I have to fall in love with a crackpot on an inventor."

"Remember what they said about Edison," remarked Bingley soothingly. "Think what people called Robert Fulton, and Eli Whitney, and others. I'm going to try once more now. The mayor—"

Sheila wasn't listening any more. She had noticed on one of the radios waiting to be repaired a neatly inscribed heart, with an arrow through it. Scrawled over the heart was the touching message, "E. M. loves Rudy Vallee."

"Good heavens, Wally, this thing must be at least fifteen years old. Do you think you can actually repair it?"

There was no answer. There wasn't even any sound in the room. Swiftly, startled, Sheila looked around. Wally wasn't there.

"He must have run into the back room to find another spare part," she thought, and waited patiently.

But the back room, too, was strangely quiet. After a few seconds, she pushed her way past the apparatus with which he had been tinkering, and cast a quick glance at the tiny space crowded with all sorts of parts that went into the making of radio sets. Wallace Bingley was not among the parts present.

"The nerve of him! Calmly walking out while I'm talking to him!" stormed Sheila.

The door slammed behind her. In the small radio repair shop, all was quiet.

BINGLEY looked dazedly around him. He hadn't walked out on Sheila. As a matter of fact, he hadn't walked at all. But here he was in the City Hall, squeezed uncomfortably between the rather plump mayor, and an even plumper member of the group of distinguished visitors who were being welcomed to the city. The mayor stared at him, and the irascible black eyes snapped.

"You young whipper-snapper, I'm not standing for any chiselers today! Officer!"

A broad-shouldered policeman moved closer. "Yes, Your Honor?"

"Where did this tin-horn come from?"

Wallace Bingley blinked. "Excuse me, Your Honor, I can explain everything. I was standing in my radio shop—"

He swallowed, hard. "I was standing in my radio shop—and that reminds me, Your Honor, I've got to get back. Excuse me!"

He ran down the steps, past the curious policemen who stared at him, but didn't try to hold him back. The mayor's black eyes snapped again.

"Another one of those annoying reporters trying to pull a fast one," he said irascibly. "I should have had him locked up, but I suppose his paper would have made a stink about it."

He turned again to his distinguished visitors. *"Comme je disais, messieurs, c'est bien un très grand honneur. . . ."*

But Wallace Bingley, no longer as dazed as before, was running home as rapidly as his long legs would take him.

He reached his repair shop, and plunged in. Sheila was gone, but apparently no one else had entered. The apparatus with which he had been working was exactly as he had left it.

He came to an abrupt halt, at the same time panting for breath as he gazed reverently at the product of his own skill. He had been trying to tune in on the ceremony taking place at City Hall when the thing had happened. One moment he had been standing in his own radio shop, the next he had been in the midst of the Mayor's guests.

He must have done something to the set. But what? He frowned with the effort to concentrate. Sheila had distracted him with her conversation about those monkeys, and his hands had gone on moving almost with a volition of their own. Somehow, he must have changed the set, must have made the few essential alterations that had produced so startling a result.

He began to go over the wiring. But offhand, everything looked the same as it had before, and he was too impatient to trace each tube and condenser, make sure of exactly where he had made the changes. That could wait till later. The important question was—would the set work again as it had just worked?

He set the distance dials so that they were tuned, not for City Hall, but for the next corner. Then he pressed the button that should have brought him the radio waves he had been trying to detect.

A stout woman screamed, and Wallace Bingley leaped back. He was at the street corner, stepping on her toes. He mumbled an apology, then ran once more for home.

The set worked as it had before. He tried it twice more to make sure. But there could be no doubt about it. It worked. Somehow, he had stumbled on to teleportation!

On the third return trip to the radio shop he passed a slim man of medium height who was carrying a small portable radio. The man wore his hat pulled down low over his face, and Bingley paid little attention to him.

The same could not be said about the man. He paid a great deal of attention to Bingley. In fact, he stared incredulously.

"That makes three times!" he muttered hoarsely. "Is he nuts—or am I?"

Frowning thoughtfully, he followed Bingley into the repair shop.

Bingley glanced around. "B'with y'in a moment," he muttered, and returned to the inspection of the wonderful apparatus he had rigged up.

SLICK BARNUM, with the small portable radio under his arm, began slowly to burn up. His nerves, never under the best of control, were now fairly raw. For three days, he and the members of his gang had been hiding from the police in a small furnished apartment that gave them little more room than to turn around and pace a few steps every now and then, like so many jackals in a cage.

For those three days, the radio had been their sole source of entertainment and news. Then the set had gone dead. It had required several hours of debate to convince Slick that he ought to go out and have the thing fixed. Now with every moment that he stayed away from the hideout increasing the danger of dis-

covery by the police, he had to contend with this wack, Bingley.

It was Bingley, he decided, who was nuts, not he. Three times the guy had sneaked out the back way, and then come running back toward the front like a bat out of hell. And now, suddenly, he had stopped being in a hurry, and was tinkering with several pieces of junk as if he had all the time in the world.

"Listen, bud," began Slick. "What kinda joint is this you're running, anyway?"

"B'with y'in a moment."

"I been waitin' five minutes already, and I'm in a hurry. I want this radio fixed, see?"

Bingley was paying him no attention. "Condenser," he muttered. "Speed up electrons . . . that must be it . . . superpose periodic velocity, although I don't see how . . . but that's why the thing can apparently pick me up bodily and transport me to next block."

"Listen, chum," Slick started to interrupt angrily. Then he stopped himself, and stared curiously. More mumbled words were coming from the wack. Slick was beginning to get a picture of what had happened. It sounded incredible.

His eyes narrowed. His right hand fumbled near his left shoulder, came out from under his jacket again. His body, turned toward the front of the store, prevented passersby from seeing the glistening gun-barrel.

"Stick 'em up, chum," he said pleasantly.

Wallace Bingley stared at the hard face, at the muzzle of the automatic, then at the face again. Slowly his hands rose above his head.

Fifteen minutes later, behind the shelter of drawn shades in the radio shop four worried members of Slick Barnum's mob were holding a consultation with their excited leader. Wallace Bingley was listening, but not talking. He was staring as if entranced at the muzzle of Slick's automatic, which Slick was waving casually in the air as he talked.

Gas-pipe Grogan, whose face was the nearest thing to a side of beef that Bingley had seen in some years, shook his head incredulously.

"I don't get it, boss. You mean that all you gotta do is stand in front of this bunch of junk here, and then you press a button, and bango—you're some place else?"

"That's the idea."

"I don't believe it. It ain't possible."

Slick turned to Bingley. "What do you say, chum? Is it possible, or ain't it?"

Bingley swallowed and managed to speak. "Of course, it's possible! Look, I'll show you."

"No, you don't!" yelled Slick. "Stay way from that thing or I'll plug you!" He faced his men again. "Get what he was tryin' to do? He'd step in front of it, disappear, then bring the cops back to get us!"

"How could he, if the thing ain't possible?"

A spasm of irritation spread over Slick's features. "I'm tellin' you it *is* possible. And I'm tired of talkin' in circles. I'm gonna prove it."

"Yeah?" remarked Gas-pipe sneeringly.

"Yeah. It's simple. One of the boys steps in front of that thing. We get this guy, Bingley, to adjust the dials so he'll send him back to our old hideout. We push the button. And there he is back at the hideout. What could be simpler?"

"You don't say!" observed Gas-pipe. "We step in front of your roscoe. You pull the trigger. And there we are. What could be simpler?"

Slick's eyes narrowed. "What are you hinting at, Gas-pipe?"

"Like you say, Slick, it's simple. How do we know what's gonna happen when you push that button? How do we know that instead of landin' at the hideout, we ain't gonna find ourselves ridin' up in the sky on a ton of dynamite?"

"You mean you don't trust Bingley?"

"And how! Why don't you send *him* to the hideout?"

"So that he can get away? Don't be a sap! We'll have to do it this way. First,

we send one of the boys . . . and *then*, Bingley! If he tries any funny stuff, he'll get it, too."

"Swell," said Gas-pipe dubiously. "He gets it, too—but one of us gets it first!"

THERE was a moment of irritated silence. Then Slick spoke again. "Look, boys, didn't I tell you the possibilities in this thing? You realize what we can do if it works, don't you? Well, all I'm askin' is that you give it a trial, a simple little trial that wouldn't hurt a baby!"

"Not a bad idea, Slick," said Gas-pipe maliciously. "Why don't you do it?"

"You mean you want me to go first?"

"Why not? We'll send Bingley after you, so you can be sure, like you said, that he ain't pullin' no fast ones."

Slick breathed hard. "Okay, wise guy. I'll do it. Come on, chum." He motioned to Bingley. "Set this thing to take us to the hideout."

Ten minutes later, Slick and his unwilling companion came in through the front door again. Gas-pipe stared at him with unbelieving eyes. "It works!" he exclaimed. "It works!"

"Like I told you," snapped Slick. "Now, maybe you'll believe what I tell you."

"Sure, boss. Anything you say. I think you mentioned a bank."

Slick nodded. "The Tenth National. The heat's on us in this town, and we can't get away without enough dough to pay the right guys. The Tenth National's got the dough."

"It's also got a lotta guards with machine-guns."

"That don't worry us. We get Bingley to set his machine so it sends us right into the vault. Before the guards know what's goin' on, we crack it and grab everything we want. Them babies with the machine-guns won't know what's happenin' until it's practically over, and when they do hear the noise, we come at them from behind. We can't miss."

Gas-pipe's beefy face seemed to glow. "Sounds good."

"Of course, Gas-pipe, there's gonna be danger, and I couldn't ask you to take a chance. That wouldn't be fair to your wife and kids."

"Huh?"

"We got enough to handle this job without you. You stay here and keep an eye on Bingley to make sure he don't try to tell the cops, or sneak after us. We'll be back as fast as we can, in maybe an hour. We'll tell you all about it, so you can get a thrill out of it, too."

"Aw, listen, Slick—"

"I've done enough listenin'," said Slick coldly. "Come on, boys, let's get started."

Left alone with Gas-pipe, Bingley stared at his companion with some interest. Gas-pipe was morose, and Bingley wondered uneasily what form the man's resentment would take. He might be the kind who thought that poking a smaller man in the jaw was funny. Bingley moved unobtrusively away.

"Whatsa matter, scared of me?"

"Not exactly."

"You're a liar. Even the boys is scared when I'm riled. I can put me fist through a wooden door without no trouble, and they know it. Look."

Gas-pipe's fist swung in a short powerful arc. One of the radios that had been left for repair splintered as five hairy knuckles crashed through the wood of the cabinet.

"I didn't think anybody could do that," admitted Bingley. His evident amazement seemed to mollify Gas-pipe, and he took advantage of that fact to ask a question. "Why are you so angry at being left behind?"

"Because when it comes to splittin' the dough, the other boys will get twice what I get."

"Oh. But after all, why do you need money? Slick said you had to have it for a getaway. But this machine of mine will take you any place you wan't to go."

"What do we do after we get there?" demanded Gas-pipe. "We still gotta hide, don't we? That takes dough. And besides, it's good to have around, anyway."

Bingley thought that over. Although he had never attached too much importance to money himself, he realized that

most people felt differently about it. Sheila, for instance. He himself would have been willing to get married right away, but Sheila had preferred to wait until he had something in the bank . . . the same bank, as it happened, that Slick and his hoodlums were engaged at that moment in robbing.

"Pardon me," he said. "Is there any reward being offered for you fellows?"

Gas-pipe turned on him a pair of cold glittering eyes. "A couple of grand. Why? Thinkin' of turnin' us in?"

"Oh, no, of course! That never entered my mind!"

AFTER that, the conversation languished. Bingley thought of Slick appearing unexpectedly in the bank, of the easy job he was probably having at this very moment in robbing the surprised bank officials, of the helplessness of the guards. A few more minutes, and he'd be on the way back. Then they'd use the machine again to project them wherever they wanted to go. As for him. . . .

Bingley broke into a cold sweat as he thought of it. The future didn't look so bright for him personally. He'd have to stop killing time and decide what to do.

He caught Gas-pipe's eyes, then looked away. The man wasn't exactly stupid, but then there were moments when he didn't think too fast. And it was possible that he was over-confident. The fact that he hadn't bothered to tie Bingley pointed to that fact.

An idea was beginning to glimmer coyly in Bingley's brain. A few seconds, and it stood forth sharp and clear. It might be difficult to carry out, but at least he could try, and if he succeeded—

At that moment, there was a noise at the front door.

Gas-pipe started. "Who's that?"

"Probably a customer."

"You sure it ain't the cops?"

Bingley threw his hands wide. "How can I be, without looking? But the chances are against it. And anyway, you don't have to worry. I remember that when we came in here, Slick locked the door."

"Yeah, but if something went wrong. . . ."

Whoever was trying the front door seemed to give up. Bingley's eyes glittered with excitement. Whoever it was had helped upset Gas-pipe and distract his attention. Now there was a good chance of Bingley's scheme working.

"Listen!" he whispered. "Maybe it is the cops! I can hear them at the back!"

He saw the look of fear come once more into Gas-pipe's eyes.

"I don't hear nothin'," said the crook.

"Come around to this side. You can peep out at them without being seen."

Gas-pipe moved clumsily in the direction he indicated, past the front of the machine. And Wallace E. Bingley, pouncing on the control button like a cat pouncing on a mouse, saw his outline flicker for a moment, then disappear. Gas-pipe, a little late, it was true, had gone to join his companions at the bank. Bingley hoped they'd appreciate the company.

Bingley ran to the front door, unlocked it, and scurried down the street. Somewhere near, he was sure, there had to be a policeman.

And then a harsh voice grated on his ears. "Where you think you're goin', chump?"

It was Slick and his hoods. They were riding in a closed car, obviously stolen, and their pockets seemed stuffed.

Bingley swallowed, tried to talk, and couldn't. Meekly, he followed Slick back into the radio shop.

As the door closed behind them, Bingley glanced up—and almost fainted. Before him stood Sheila Vane. She was poking with curious fingers at the apparatus he had set up, standing in almost the exact spot Gas-pipe had stood before making his exit.

"Get away from there, Sheila!" Bingley shrieked excitedly. "And stop monkeying with that!"

"You needn't be afraid I'll hurt it," said the girl, taking offense. Then her eyes caught sight of Slick and the silent mobsters behind him. "Who are these men?"

"Never mind who we are. Who are *you*, sister? And what did you do with Gas-pipe?" snarled Slick.

Bingley swallowed the lump in his throat. "This is Sheila Vane, my fiancée. I guess she just walked in, and—well, here she is!"

"I didn't just walk in," replied Sheila. "I tried the front door, and that was locked. So I came around in back."

WALLIE BINGLEY smiled ironically. If he'd only known, when he pretended to hear that noise, that some one was actually coming around the back way! He could have sent Sheila for the police, and they'd probably be here by now. Instead—

Instead, Slick Barnum was saying coldly, "Where's Gas-pipe, sister? Or don't you understand English?"

Bingley interposed hastily. "Gas-pipe happened to step in front of the machine. Then something kind of fell on the button, and—Gas-pipe just disappeared."

"The dope. So he let you put one over on him."

One of the other gangsters spoke uneasily. "This don't look so good, Slick. Gas-pipe probably landed in that bank. And when we left, it was just beginnin' to buzz with cops. They musta got him."

"Sure they got him. And Gas-pipe can't take it. He'll talk."

"We gotta get out of here, Slick."

Slick nodded. "There's a guy I know who runs a farm right outside the city limits. With the dough we got, he'll be willing to take care of us."

"Well, what are we waitin' for?"

Bingley stared at Slick, and his mind seemed to catch the other's thought. "Honest, I won't doublecross you. I'll set the dials to take you anywhere you want."

"You're telling me," grunted Slick. "Listen, sap, this is the way we're gonna work it. You set the dials, so that it'll bring us wherever we want to go—and it ain't gonna be this farmhouse, either. We send one of the boys there. And after him, we send this dame of yours. Then the rest of the boys. You'll be the only one left at this end. If you try to pull a fast one, and send the cops after us, it'll be too bad for her. Get it?"

Bingley's forehead was covered with perspiration. "I get it. You can trust me."

"We'll see about that. Set the thing so it'll take us to Chester Road."

Bingley's hand twisted the dials feverishly. It took but a moment to adjust them. He shivered as Slick's cold eyes drilled into his own.

"Everything fixed?"

"There won't be any trouble."

"There better not be. All right, Lefty."

He motioned with his right hand, and one of the thugs stepped in front of the machine.

Nothing happened.

Bingley touched the button again, but still Lefty remained in front of the machine. Fine beads of perspiration stood out on Bingley's brow. Slick Barnum was frowning.

"What's wrong?"

"I don't know. It just don't work. Sheila must have changed something."

"I hardly touched a thing," said Sheila aggrievedly. "I just turned this knob a little."

Her forefinger touched one of the dials. And then, as Bingley pressed the button again, something happened.

Lefty had stepped to one side, and was just returning to his place in front of the machine, when he found his way blocked. The room was filling with policemen who seemed to be materializing out of space one after the other. For several seconds they stared around them, their expressions as frozen as those of Slick and his thugs. Then they swung into action.

Bingley's first thought was for Sheila. He grabbed her gallantly, and threw her to one side, out of the path of flying bullets. Lefty was in a hand-to-hand grapple with one of the policemen, and Slick was tugging desperately at his own gun. Wallie Bingley launched himself through the air in a magnificent flying tackle, and caught Slick around the knees.

Both went sliding into the wonderful

machine, and both recovered from the shock at about the same instant. The butt of Slick's revolver swung at Bingley's head, glanced off, and shattered a vacuum tube. Bingley's hand closed over a condenser and swung it vigorously. A sharp edge cut into Slick's skull, and he groaned.

The next moment, as a fist landed high on his face, he groaned again, and his grip relaxed. Bingley thoughtfully lifted another vacuum tube and hit him over the head with it. This time his eyes closed.

AS BINGLEY stood up, he realized that, as far as the rest of the thugs were concerned, the fight was over. They and the police were standing around, watching with interest.

"Nice work, buddy," said one of the policemen.

"Thanks," gasped Bingley.

Sheila was patting her hair into place. "Well, I never knew you were such a caveman, Wallie," she exclaimed. She wasn't angry, either.

"I couldn't help it." Bingley blushed. "I didn't have time to think."

"Listen, bud, you've got plenty of time now," said one of the policemen. "What's this all about? How did we get here?"

"I'm not sure, but I think that while Sheila was puttering around, she must have reversed the action of this machine. Instead of taking you places, it brings you back."

"Clear as mud," observed the policeman.

"But I don't see," pointed out Sheila, "how the machine happened to bring policemen here. If you were trying to send these crooks to the place they wanted—"

"I wasn't. There was only one way out, so far as I could see. I was trying to send them into a police station. That's why I was so upset when the thing didn't work."

"Dirty doublecrosser," growled Slick.

"Don't mind him," said the policeman. "There's a reward for turning him in. You can take the money and go into building these machines wholesale."

"That's right. All I have to do is go over the wiring carefully, and—"

He stopped suddenly, and stared ruefully at what was left of the machine.

"Not much to go over," said the policeman sympathetically. "But I guess you got a record of it."

"I haven't." Bingley's voice was hollow. "I didn't have time to make it before—and now it's too late."

"Anyway," said Sheila, "with the reward money, we can get married."

Wallie Bingley brightened. "And then I'll have to start my experiments again."

Sheila shook her head. She looked pleasant but firm.

"And then you'll fix a radio or two. Some of those monkeys may be lucky enough to turn out a page of Shakespeare every million years or so, but not two pages in a row. You've turned out your page, Wallie; you can't expect to knock out another one."

"The dame sounds like a wack, too," grunted Slick. "What's she mean, talkin' about monkeys?"

"None of your business, you big ape," retorted Wallie. Then he faced Sheila and sighed. "Okay, toots, you win. But I was just thinking that if I could hit on the right setup again. . . ."

"Yes?" Sheila prompted.

"What a swell way to go on a honeymoon!" he murmured dreamily.

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The Space Dwellers

By RAYMOND Z. GALLUN

Douglas Barclay, Scientist Extraordinary, Achieves the Impossible When Othaloma, Chief of the Daans, Leads Him to Immortality!

DOUGLAS BARCLAY had one characteristic for which he was remembered even after his disappearance. When he heard anyone denounce some apparently wild scientific theory or dream as being impossible, he had a habit of smiling a tolerant smile, that, nevertheless, seemed to be tinged with a hint of pity or even contempt. All through his short but brilliant career he refused to tie himself down to any fixed standard of distinguishing possible from impossible. His imagination seemed completely elastic.

It is partly because of this, that his friends who read the last letter that he wrote, have never ceased to be puzzled. They simply can't believe what he wrote to be true. Yet, there is his sudden disappearance—but let's go on with the story.

It all happened on the night of July 17th and the early morning of July 18, 1951, when Hanley's "false comet" approached its closest to the earth. The "false comet" was that queer marauder from outer space that broke all the rules of comets and acted always as though directed by some intelligent entity. It lost speed rapidly as it raced into the solar system, directed its tail straight toward the sun, and neglected entirely to swing around that body and to hurtle back from whence it came. Instead it defied solar gravitation, held a perfectly straight course and vanished at last at a point among the stars opposite from where it was first seen.

At this time Barclay was working in his laboratory, which was situated on a secluded little island in a small lake of northern Wisconsin. The youthful savant sat before a paper-littered desk in a big-domed workroom, while outside a strong south wind sent moisture-laden thunderclouds racing across the night sky. He was alone with the greatest of his dreams, for it was late and Ching Loo, his Chinese servant, had retired.

Barclay was paying close attention to several dials on the control board of an enigmatic mechanism that buzzed and hummed directly in front of his desk. The machine was his super-press with which he hoped to tap the secret of intra-atomic energy. Since early youth he had felt certain that, if a substance were submitted to some titanic crushing force vastly beyond any yet in use, the well-nigh inexhaustible supply of power stored in the atoms of that substance would become available to mankind.

SUDDENLY a wicked flash of bluish light shattered the darkness outside the laboratory. Immediately there followed a deafening roar of thunder, then Barclay heard, or thought he heard, an unfamiliar sound, a low droning. However, it may have been just fancy. Through a screen door, which led into a neglected little flower garden, he saw a nebulous patch of bluish radiance beneath the trees. It wavered for an instant like a will-o'-the-wisp buffeted by the wind, and then vanished. The droning, too, had died out.

With a queer tingling sensation at the nape of his neck, Barclay walked to the door and peered out. He could see nothing but blackness. It was raining violently now. Save for the hiss of falling water and the tapping of the wind-driven waves against the shore, all was silent.

"The sound and the lingering glow must be new and unrecorded phenomena of the lightning," he thought. "I'll make a note of them—a limb off a tree is probably the only damage."

But somehow he had failed to reassure himself. What if there were something out there?

EDITOR'S NOTE

Some stories are forgotten almost as soon as they are printed. Others stand the test of time.

Because "The Space Dwellers," by Raymond Z. Gallun, has stood this test, it has been nominated for SCIENTIFICTION'S HALL OF FAME and is reprinted here.

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"We found that the two species of this strange race were continually at war"

Foolish thought! His nerves had never troubled him that way before.

In a queerly disconnected way Barclay wished that he might see the "comet." Somehow he was morbidly fascinated by its gray ghastliness. Then as though some dark genie were up there to do his bidding, a little patch of cloud rolled back and the visiting orb shone down mistily upon the earth.

The cold light revealed the island landscape dimly for a second and then was blotted out. Had Barclay's imagination again played him a trick, or was it true that he had had a fleeting glimpse of something flat and strange out there?

"I guess this big experiment has made you a little unstrung, old boy," he said to himself. "It was just a grotesque shadow, a fallen limb or something. When this downpour stops, you'll be able to tell surely."

Barclay returned to his desk. A minute passed, the screen door creaked as though a sudden gust of wind had moved it. It creaked again; but the young scientist did not notice, for he was absorbed with his work. Another minute flitted by, while a feeling of uneasiness that was almost dread crept into Barclay's mind. He turned about—and then there was the strangest meeting in the history of two worlds!

Barclay gasped in thunderstricken astonishment. Had too-constant study driven him to madness, or was it true that some mysterious fiend had come to pay him a visit? His first impression of the creature that had entered was that it was of heroic proportions—fully seven feet tall and black as jet.

A fleeting idea that a huge negro, with malicious intent, had invaded his laboratory, quickly left Barclay when he saw the flawless perfection of his visitor's features. Certainly they did not belong to any savage African. Straight black hair, cut square at the shoulder, framed the giant's face; and was held in place

by a thin band of platinum, on the forward portion of which a big ruddy jewel gleamed with all the malignant fire of some dying sun.

Barclay's visitor wore no clothing save for a breechcloth of some snowy material. Fastened to the belt that supported it was a small rectangular case of some greenish material. It bore a circular dial on the circumference of which were engraved many characters. A flexible metallic cord led from it to a sort of holster where reposed a weapon that looked like some quaint form of pistol.

For many seconds Barclay's eyes lingered over the bulging muscles of this splendid being. Finally he managed to gasp:

"In God's name, who are you?"

The other smiled slightly and raising his hand he pointed upward.

"I am Othaloma of the Stars," he said in perfect English. "I come from the 'comet' which is now crossing your solar system. Truly, Earth Man, I am as surprised at your appearance as you are at mine; for never in all my wanderings have I encountered a creature so closely resembling the members of my race. I have visited many planets and many were inhabited by monsters endowed with intelligence; but never was there a single human."

A long moment passed during which Barclay struggled fiercely to collect his wits and to regain his composure. Finally he spoke in a shaky voice:

"From the 'comet,' you say, you come? Rot! Since when do they speak such polished English on worlds far removed from the earth? And yet, if you don't come from the 'comet' where can your home be? I don't know of any place on this planet where they raise your kind."

A TOLERANT smile crossed the giant's lips.

"I, Othaloma, Chief of the Daans, will answer your questions and supply you with adequate proof of all that I say. The fact that I can make use of your language is easy to explain. For ages the people of my race have been developing a peculiar faculty of the mind which enables us, not only to read the thoughts of others, but also to penetrate into their subconscious memory and learn to make use of the impressions stored there. Certain individuals can seal their minds against such intrusion, but this power is developed only with much practise. Since everything you know is as clear to me as an open book, I find it quite simple to choose words from your brain, form them into sentences and express myself intelligently in a tongue of which I have never heard before tonight. Some day the people of this world will doubtless make use of the same power.

"I can see very plainly that you are much puzzled as to my origin. You seem to find it impossible to believe my statement that I am an inhabitant of the 'comet.' I think I can convince you. First of all, do you find anything peculiar about the temperature of this room?"

For a moment Barclay took stock of his impressions. Now he realized fully that he felt uncomfortably cold. Perhaps the feeling was the result of the nervous shock occasioned by the arrival of the black man. But no, that could not be. Barclay's breath puffed out in a white cloud just as it would do on a frosty autumn morning. The air in the domed chamber really was cold.

"Now look at me," said Othaloma. "Observe my skin carefully. Do you see anything peculiar about it?"

Barclay obeyed. He saw now that the shoulders of the big black had a glassy smoothness that seemed decidedly unnatural. Little specks of light gleamed from Othaloma's lower torso like tiny jewels—no—like frost particles! It looked as though raindrops had congealed on his ebony hide.

The colossus came forward and held out a hand.

"Touch me," he commanded, "but touch me as though you were touching a wire bearing a strong electric current."

Again Barclay did as he was bade. As the tip of his forefinger came in contact with his visitor's palm, an icy chill tingled and vibrated through him. Completely chagrined, he jerked his hand quickly away.

The smile on Othaloma's lips broadened.

"The chill of outer space," he said, "permeates my entire body. Where I live the temperature lingers perpetually almost at absolute zero, and there is no air."

"But life cannot possibly exist under such conditions," Barclay exploded. "Such a thing is unheard of."

"Am I not a living proof that it does exist under such conditions?" retorted Othaloma. "Besides, is it good sense to say that a thing is impossible merely because it is unheard of?"

Barclay was silent.

Othaloma leaned against the framework of the great press beside which he was standing. His eyes were bent on the floor. Finally he raised his head.

"Earth Man," he said, "from afar I sensed the presence of a mind of unusual power upon this island and hither I have come that we might partake of each other's knowledge. I have told you I am a creature foreign to your planet and I have offered proofs that have momentarily bewildered you. But, knowing that you are a man capable of grasping great things, I think if I tell you more you will understand and believe. Therefore, with your permission I will relate to you the history of my world and my people. Will you listen?"

"Certainly," returned Barclay, his voice full of eagerness. "There is a chair beside you. Please be seated and make yourself comfortable."

Then the Chief of the Daans, and nomad of the empty abysses between the stars, began the wildest tale that has ever fallen upon human ears.

"FAR beyond the red sun which you call Antares, and several hundred light years from your earth, is another solar system. In it there spin several planets; of one of these I am a native. It was a fair world once, with green fields and forests upon which the bright sun shone, and there were great oceans—oceans now calm and serene beneath the blue

sky and now lashed to white-capped fury by the storm god.

"Set along the shores of those seas, nestling amid the verdant plains and snow-crowned mountains, were thriving cities inhabited by a happy fair-skinned people. All was prosperity and peace. War had been done away with and a spirit of mutual helpfulness had brought them perhaps as near to Utopia as it is possible to get. The climate was delightful and there were plenty of the necessities and luxuries of life for everyone.

"For many thousands of years this golden age endured and then a serious trouble came to vex the minds of the fair-skinned people. Their period of leisure was over. Disquieting signs and warnings began to appear. Gradually, as the millenniums slipped by, the sun changed its hue from yellow to orange and from orange to red—a red that deepened and deepened. Plainly the old luminary was cooling.

"The climate of the planet was becoming cool, too. Extensive ice caps collected at the poles and lingered far into the summer season, and crops were becoming harder to raise. There were other omens. The oceans were shrinking and the air was becoming more and more rarefied through slow but steady leakage into space.

"As generations passed the inhabitants of my native world were forced to desert many of their cities and rich farm lands upon which the deserts were encroaching—deserts over which icy winds raced bearing with them choking clouds of fine sand.

"During the ages before the beginning of their tribulation, the people of my native world, pronounced Mar-Bilione, in your tongue, had amassed much scientific knowledge. With this they sought to ward off the death of their planet. Drawing water from the polar snowcaps which melted every summer, they made fertile vast tracts of arid land by means of a wonderful system of irrigation. For a time it seemed that the greatest of their troubles was over, but wise minds knew that it was only a reprieve.

"All these things had happened long before my time. When I was born conditions had become much worse. So thin had the atmosphere become that the sky had no longer the azure hue of former ages. Instead it was a deep blue-black, and in it the stars twinkled even during the day. The water supply had all but vanished. What little was left was kept in underground reservoirs where there was the least chance that more of it could escape.

"The dwindling remnants of the fair-skinned race lived in hothouse cities roofed with domes of quartz glass—marvels of engineering it is true, but still inadequate to ward off permanently the hostile legions of nature. Beneath the domes of these cities the air was kept constantly at a pressure endurable to mankind by means of numerous compressors.

"Within the cities thousands of brilliant minds were at work upon man's supreme problem. One scientist suggested that we migrate to some more hospitable world, but certainly no other world in our solar system would support human life.

"Another scientist, seeking to replenish both our air and water supply, discovered that it was possible to transmute certain heavier elements into oxygen and hydrogen, but this process was far too slow to be of the least help. Still another savant claimed that he could rejuvenate the dying sun by means of a certain combination of rays, and an enormous amount of labor was spent erecting a projector. But his scheme was a complete failure.

"In those years when my father was Emperor of Mar-Bilione and I was still a mere princeling, I took much interest in science. I was under the tutorage of a marvelous old genius named Grooga. In his younger years he must have been handsome but now he was 'Grooga, the Hideous.' During an experiment some hellish chemical had eaten away half his face, including his left eye. Through the gaping red scar his white teeth gleamed horribly. He seemed half demon.

"Together Grooga and I built a space flyer, the first to be constructed upon my world. It was a long, torpedo-shaped craft, fitted with electric gravitational screens and propelled after the fashion of a rocket. The gravitational screens had been invented by Grooga, and I had designed the rocket-motors. Compared to the ships we have now, it was very crude, but it seemed wonderful to us then.

"EARLY one morning our strange craft arose rapidly from the landing stage just outside the dome of my father's capital city. On our maiden voyage we intended to explore the hundreds of tiny moons that encircled our planet.

"From moon to moon Grooga and I flitted in our interplanetary vessel. There was very little to attract our interest, upon most of them, for they were only burnt-out lifeless cinders.

"Then we came to Goraz, the largest moon—it is about fifteen of your miles in diameter—and there we found a thing of which not even the most imaginative of our theorists had ever dreamed. Earth Man, I doubt if there was one molecule of air or water upon the barren surface of that minute world, and night and day the temperature lingered at only a few degrees above absolute zero. Yet there was life! Earth Man! Do you hear me? Life!

"And what eerie, horrible things there were—phantoms of madmen's dreams! All were dead black and had many tentacles. They had no fixed form, no definite number of limbs or eyes, such as have creatures of our native land.

"They grew as trees grow, haphazard. All were intelligent, they had brains almost equal to ours in power, and yet their mentalities were different in kind. Their main idea was to kill and destroy. As soon as we landed they made a concerted rush for our ship in a shuffling crowd. With high-explosive grenades we destroyed dozens of them, but the others rushed on. One little fellow got hold of me. Ugh! I still shudder at the thought of it!

"Both Grooga and I were dressed in heavy metal armor, similar to your submarine diving suits and our faces were covered with our

oxygen masks. Had it not been for this protection, I am sure the Gorazian would have torn me limb from limb.

"Spirits of a hundred forefathers—that ghoulish thing was endowed with the strength of ten devils! I cut him in two with my sword and still the halves of him clung to me with a persistence that baffles reason. A blackish liquid dripped from him and when its flow ceased he moved no more.

"How did these bizarre creatures live on this airless, waterless world where the chill of outer space lingered perpetually? For a little while even Grooga was baffled; but few things in the universe could baffle the mind of Grooga for long.

"Together we captured a specimen of the Gorazian race. First Grooga observed it carefully, and then he killed it and made a chemical analysis of its bodily tissues in the laboratory of our ship. He also examined that tissue under the microscope. Then he made his announcement to me:

" 'Prince,' he said, 'we are the discoverers of a form of life that depends upon an entirely unheard of principle for its existence. All living things must have some source of energy to carry on their bodily processes. In the case of creatures native to our own world, this energy is derived from the chemical combination of various substances with oxygen which enters their bodies through their lungs or other breathing organs.

" 'Since there is no air on Goraz, such a supply of power is not available here, these queer animals get their energy from within the atom by means of radio-active disintegration. It sounds impossible but it is true. The black liquid that flows in their veins is a very heavy element, even heavier than our heaviest known substance, uranium. Like uranium and radium, it is always producing energy from within itself. It is extremely radio-active, and has an enormous output of atomic energy.

" 'On Mar-Bilione the liquid upon which all life depends is water. The temperature at which living things can exist there ranges between the freezing and boiling points of water. The radio-active liquid which corresponds to water here on Goraz boils only when subjected to intense heat, and it freezes at absolute zero. Since it is producing heat all the time, it can never become so cold even on Goraz. That is why these strange creatures can survive the intense cold. I have also found that they can exist at temperatures that would melt iron.'

"Grooga and I spent days wandering over the face of Goraz observing its inhabitants. At first they fought us, but they soon got it through their minds that we were dangerous and better left alone. They seemed to have attained a very considerable measure of civilization. They lived in caves and understood the working of metals. By mixing the radio-active liquid (which has since been named *xata)* with certain other chemicals, they were able to produce an intense heat, and with this they smelted copper and gold.

"The principal portion of their food was *xata.* On the under sides of their tentacles were dozens of tiny suckers or mouths and through these the liquid was absorbed directly into their veins. In addition to *xata* they consumed certain salts and substances rich in silicon to build up their body tissues.

"WE FOUND that there were two species of this strange race, inhabiting villages on opposite hemispheres of Goraz. They were continually at war. The motive of each was obviously the extermination of the other. Each longed for complete control of the rapidly dwindling supply of the vitally important *xata.*

"Once there had been large lakes of it, but the greater portion had either split up to form simpler elements, or had evaporated into space even as the water of Mar-Bilione had.

"During our first stay on Goraz we saw the large village of Narbool raided (we called it Narbool after the capital of my father's empire). The slight gravitation of the tiny moon, and their great strength, enabled the invading tribes to move very rapidly in great leaps and bounds of over fifty feet.

"To Grooga and me, hanging above Narbool in our space ship, the *Silver Meteor,* it seemed that they came as suddenly and unexpectedly as a bolt of lightning from a clear sky. And yet the Narboolians were not taken unawares. They had been warned and were ready.

"In each of the two Gorazian villages there was a slender spire-like watch tower constructed from blue stone, and at its pinnacle a guardian monstrosity stood eternally on the lookout for just such a raid. At times the red rays of the sun glinted on the polished copper tip of his spear, or again the orange glow of Mar-Bilione or the ashy radiance of the hundred hurtling moons would be reflected from his queer, jewel-studded golden armor. He was always there, ready to give the alarm.

"The battle surpassed all possibility of description. If ever there was a combat of ghouls, this was one. It was horrible and disgusting beyond words—the masses of writhing, snake-like tentacles woven inextricably together, the creatures being torn into bits with half their limbs gone, yet fighting on with a vitality that mocks reason.

"All these things made Grooga and me shudder with revulsion and yet, even as we turned away nauseated at the sight, our hearts filled with admiration for the inhuman courage of those fiendish things battling beneath us. Their ferocity was awful to see. As soon as a Gorazian was killed, his opponent would suck the life-giving *xata* from his veins and then seek out another victim.

"After about half an hour of struggle the invaders withdrew. Each side had lost about a third of their number. It seemed to us at first that if such battles were frequent, life would soon disappear from the face of Goraz. Such, however, was not the case; the Gorazians reproduce very rapidly and, barring violence, they are immortal.

"I do not know exactly when Grooga's great inspiration came to him. However, we had been on Goraz for a period equal to five of your days when he became very taciturn and thoughtful. Though he avoided speech with me as much as possible, he often muttered to himself.

"Naturally, I became suspicious that some-

thing important was afoot, but I was intelligent enough not to attempt to induce Grooga to tell me what it was. There was nothing which the scarred old scientist so much detested as to have one, whom he considered a mere stripling, attempt to pry into his thoughts. Consequently there was nothing for me to do but to keep quiet and await results.

"The results were not long in forthcoming, but they only served to mystify me the more. One day we returned to Mar-Bilione. With utmost haste Grooga loaded the *Silver Meteor* with numerous small animals and a complicated mass of scientific apparatus. Then we raced back to Goraz.

"And now a faint inkling of what Grooga was attempting came to me. Together we gathered a quantity of *xata*. First of all, Grooga placed a tiny speck of it in a drop of water containing microorganisms native to Mar-Bilione; plainly he wanted to observe the effect of *xata* upon a form of living tissue with which we were more familiar. All of the infusoria died immediately. Next he injected *xata* into the system of a large insect; it died. How many similar unsuccessful experiments we performed I do not know; and then one day we began to be successful.

"A PARTICULARLY hardy animal managed to survive an exceedingly small dose of *xata*. Next day we gave him a slightly larger dose and so on. Meanwhile, we treated him with certain rays as yet not fully understood by savants of your earth. Soon startling changes began to take place in him. His skin, which had formerly been pink, became black, with the increasing quantity of the black radio-active chemical in his body. His blood changed from red to purple and from purple to black—pure *xata*.

"He shunned his food more and more, and at last dispensed with it entirely. Meanwhile, his breath grew less and less rapid and then died away to nothing. The energy that was now keeping him alive was the result of the radio-active disintegration of *xata*, rather than the chemical combination of oxygen with food.

"We took frequent tests of the percentage of water in his system. It decreased as the days passed, and eventually dropped to zero. The water had been replaced by *xata*.

"While all these strange things were going on the little animal became more and more active, and its strength was almost unbelievable for so small a creature.

"Though it still kept its Mar-Bilionian form it was Gorazian in every other way and perfectly capable of existing under the most severe of Gorazian conditions.

"Now that the complete consummation of the greatest accomplishment that he had ever conceived of, was so close at hand, Grooga was elated. However, there were still several things to do, just to clinch his discoveries.

"To begin with, we treated other animals in just the same way that we had the first. Several died, but the majority survived the transformation. Lastly we set about determining whether Grooga's process would work on a human being. For this experiment we used a slave whom we had brought along. The attempt was successful.

"The huge servitor who had formerly been white, became an awe-inspiring black genie with perhaps four times the muscular power which he had formerly possessed. He could survive in an airless, heatless void and unless he encountered some violent destructive force like an exploding bomb, or starved for want of *xata*, he was immortal. The impossible had been accomplished!

"As our space ship arose from the scarred and tortured face of dead Goraz, Grooga looked up from the control board in the conning tower and turned toward me.

"'Congratulate me, Prince,' he said, 'for I have saved a great race from destruction upon a dying world. I am certain that there is an inexhaustible supply of *xata* far beneath the crust of Mar-Bilione. With it we will transform every man, woman and child even as we have transformed the slave, Zat Agga. Then, let nature try to strangle and freeze our people to death!'

"I wrung Grooga's hand enthusiastically and, according to a custom practised by members of the royal family when they wish to reward someone who had accomplished important things, I presented him with a priceless old anklet which had been a treasured heirloom of my dynasty.

"The hull of the *Silver Meteor* glowed redly as it streaked through the thin atmosphere of Mar-Bilione. Its immense speed betokened the importance of the news it bore.

"From that night of our return dated the rise of Grooga's greatness. Two hours after our arrival on our home planet, he made a demonstration of his discovery in the throne room of my father's palace before five thousand of the empire's most noted scientists. During that demonstration he reduced the temperature of our transformed slave's body well below zero, deprived him of air and finally gave him an incandescent metal bar to hold. The bar made the slave's bare hands become red-hot, yet he underwent no apparent discomfort.

"IT IS needless to say that Grooga's idea took Mar-Bilione by storm. By dawn the following day his name was already written indelibly in the records of eternity. He had become the idol of Mar-Bilione. Within a period equal to six of your months we had transformed practically the entire race into black-skinned supermen who could survive nature's severest rigors.

"But the first injection of *xata* killed my aged father and I inherited the empire from him together with all the troubles that go with it.

"Soon Grooga's power grew to such proportions that it began to seriously hamper my control over my realm. Earth Man, I loved Grooga as a brother, but the law is that there can be but one ruler in Mar-Bilione.

"On a certain dark night, the hideous old savant was torn to fragments by an explosion that wrecked his entire laboratory. Because of some miscarriage of my plans, the blame for his death was immediately fastened on me. The people went mad; they thirsted for my

blood and the blood of my few faithful followers.

"For a little while I thought I had a chance against my enemies, for I had just discovered a new ray that released atomic energy in a substance instantly when it touches it. It is needless to say that it was a mighty weapon.

"What is that which I read in your mind, Earth Man. You, too, have sought the secret of atomic energy? Yes, I see that it is so. Your theory of compression is correct but your method of producing is crude. My ray creates a powerful attractive force between atoms which draw them closely together, much more rapidly and easily than your press will do.

"I had hoped to keep the principle of my new weapon a secret but it soon leaked out. Now there was nothing for my minions and me to do but flee. The only places where we could have even temporary safety were the moons.

"Our battle-craft were all fitted for interplanetary travel and it took only a short time to reach our new homes. Life should have been easy there, for we had all we needed; *xata* was plentiful in the centers of several moons. However, the enraged Groogans, bent on our extermination, pursued us. Where could we go now? With atomic energy at our command the answer was almost easy.

"All about us was the sable sky flashing with icy stars—myriad legions of them stretching into the endless vastness of the universe. They beckoned to us—beckoned to that burning spirit of adventure that is ever the possession of a strong, virile race. Could we resist this chance to explore and learn? No!

"On each moon we built an immense driving mechanism of the same type used in our space ships. Then, one day, the tiny satellites tore loose from their orbits and after joining into a cluster began to rush with almost the speed of light out into interstellar space. Behind us always there trailed a long train of faintly-luminous gases ejected from the propelling machinery. That glowing appendage gives the swarm of moonlets the appearance of a true comet, and there is little wonder that your savants mistook it for such.

"Thus we became the Daans or Nomads. For more than a million of your years we have been racing madly toward nowhere, visiting worlds, experimenting and amassing knowledge. To what ultimate purpose is it all? Though I am perhaps older than your first human ancestor, I am no nearer to the answer of that question than you.

"I think I have told you about all there is to tell, Earth Man. Now I must hurry home. Already I have stayed longer than I had planned. As it is, it will take me nearly two hours to reach the 'comet.' In departing, I wish to say that this little time spent with you has been most pleasant. Your mind, which I have rummaged over thoroughly, is filled with so many quaint and interesting ideas!"

BY THIS time Barclay had rid himself of much of his bewilderment. After all, Othaloma and his story, although surely fantastic, were not impossibilities. The young scientist's mind was functioning clearly again and he was not slow to see that he might win knowledge from Othaloma that would enable him to make of some of his fondest dreams, realities.

"Though the things you have told me amaze me immensely," he said. "I, too, have enjoyed your visit. But now there is one thing that I wish to ask you. As you know, I have sought the secret of atomic energy for a long time. I have always cherished the idea that with the power of the atom at my command I might be able to construct a space ship and visit other worlds. How is the ray which releases atomic energy produced?"

Othaloma eyed Barclay for a moment. "So you want to see other worlds do you? Well, if that's the case, I can do more than merely tell you how to release the power of the atom. Why not come with me to the 'comet?' We will treat you with xata and you will become as deathless as any of the Daans. Then indeed you will see the universe. Will you come?"

Barclay felt the color fading from his cheeks. What an idea! What an awful and wonderful idea! The universe and practical immortality—thousands of years in which to study and learn! There was nothing to hold him back—no friends, no relatives, only a paltry five hundred thousand dollars' worth of property and that could go to the state.

For a few seconds Barclay felt an icy pang of fear. What if the black giant were leading him off to perform some hellish experiment on him, vivisect him, torture him? But the terror in the savant's heart passed quickly. Seekers after wisdom must take chances. After all, death was the worst thing that could happen, and that always happens sooner or later anyway.

And he could leave a message that would stupefy and amaze those dry-as-dust doubters who would try to probe the secret of his disappearance!

"Give me an hour and I will be ready," he said. Othaloma nodded and withdrew.

For an hour Barclay sat writing and finally with a smile laid down his pen. We can imagine how a short time Othaloma reappeared. "Have you finished?" he asked.

"Have you finished?" he asked.

"Yes, lead on; I'll follow," said Barclay.

"Come then," returned Othaloma. He strode out into the little garden and Barclay, a trifle nervous, followed him closely. It had ceased raining now, and a few stars were trying to peer through the veil of clouds.

By the glow from the doorway of the laboratory Barclay saw a flat, oval-shaped machine resting on the ground. On top of it were a seat and several control-levers and behind the seat there was an oblong box-like affair of considerable size. Othaloma fumbled with it for an instant and then raised its lid.

"This is my specimen chest," he said. "I use it to transport to the 'comet' the various living creatures which I collect on the planets I visit. Since you are still dependent upon air and warmth for your existence, you'll have to travel in it. It will protect you from interplanetary cold and, since it is air-tight there will also be enough air inside to sustain you.

(Concluded on Page 117)

This STARTLING WAR

News and Notes from the Science Front

AMERICA'S STARTLING WAR PRODUCTION RECORD—If it seems at times that American war production has lagged interminably thanks to bottlenecks and absenteeism and raw material shortages and faulty planning, just take an Axis-eye look at the record, and the whole tone of the story does an about-face.

According to Harold V. Coes, vice-president of Ford, Bacon and Davis, Inc., in a lecture to the American Society of Mechanical Engineers at Davenport, Iowa, recently, the United States has produced as much war equipment in a little more than two years as Japan in thirty years, Russia in twenty years and Germany in ten.

Whereas, six years ago, there were but ten shipyards in the country with 46 ways big enough to accommodate large vessels, today there are 60 such yards with more than 300 ways. The rise in production for ordnance in 1942 was six-and-one-quarter times, that of merchant ships five times. The machine tool industry is operating at seven times its peacetime peak, aluminum is running neck and neck with that figure, having merely septupled the top figure of 50 years of intensive development in 28 months. Axis papers please copy.

* * *

***TAKE, OH TAKE THOSE BOMBS AWAY—A** "Black Maria" for big-bad bombs has been patented by a trio of New York inventors, T. W. Rochester of Tuckahoe, H. W. Barron of Laurelton and J. T. Gibala of Little Neck. The device is to keep duds or delayed detonators from spraying the landscape with destruction while they are being carted away to safe place.*

Realizing the impossibility of confining the explosion altogether, the inventors concentrated on preventing damage from flying splinters, while permitting the blast gases to vent themselves. This is accomplished by building a cage of interwoven steel cables around a stout frame of steel plates set edgewise toward the probable center of explosion. The bomb is cradled in an inner cage placed as near the center of the vehicle as practicable. The whole thing is mounted on a truck or trailer with a wide, sloping metal apron protecting the rear of the driver's cab.

* * *

FLYING TRACTORS FROM ENGLAND—An English inventor, O. F. MacLaren of West Drayton, has obtained an American patent on what he calls an endless track band which is to be substituted for wheels on airplane landing gear and is also stated to be suitable for use on ground vehicles. The band resembles the linked tread of a tractor, but is much lighter. Each of the articulated links in the tread is provided with a pad, preferably of rubber, to make landings easier and get a better grip on the ground.

* * *

***WHAT—NO BACON?**—Canned ham and eggs, a ready to heat and eat product, is the newest thing in Army food to pass the tests at the Veterinary Laboratory of the Army Medical Center at Walter Reed Hospital in Washington, D. C. Samples from the first consignment of 9,600,000 orders passed on taste as well as on other tests recently. Inspecting and testing all food for the Army which has an animal origin, from ham, eggs and sausage to milk, fresh or canned, is one of the important and continuous missions of the Army Veterinary Corps.*

* * *

NEW TWO-WAY BOMB PATENTED—Late addition to the country's arsenal of weapons is a combination demolition and incendiary bomb offered by Milton A. Walker of San Jose, California. The aerial torpedo is arranged in two sections, tandem fashion. Downward flight releases a latch, then an inflated sack is ruptured, forcing the sections apart.

Thus the bomb strikes the target at different times in different positions, increasing destructiveness by piling the havoc of fire atop the demolition explosion.

* * *

***HARMLESS BULLETS FOR TARGET RANGE**—The undeadly bullet is the invention of J. H. Hodgson of Westport, Connecticut, to replace ball cartridges sometimes responsible for serious accidents on the target gallery. The chief danger of such accidents lies in the tendency of the ordinary bullet to ricochet. To prevent his new type slug from whizzing about after striking the target, he makes it hollow and fills the cavity with a mixture of iron oxide and minute lead particles. The Remington Arms Company has purchased all rights.*

A space ship, an exact copy of his own ship, was speeding directly toward him from the silvery clouds ahead.

SECRET WEAPON

By JOSEPH FARRELL

In a Space War, a Clever Commander Finds One Way to Outwit a Vicious Pirate—and It's All Done with Mirrors!

COMMANDER Sheldon studied the leering features in the teleplate. His eyebrows were drawn tensely above his troubled eyes, and his hard jaw was set grimly. His glance darted briefly to the two junior officers huddled beside the table, then back to the instrument.

"Hurth Lheuin," he said, "have you considered what you are doing? You realize that when you defy the patrol, you defy all the civilized world?"

The face of the outlaw chief was smug, self-confident.

"That's what I want, Sheldon. I'm setting myself against your so-called civilization, and you know I'm man enough to do it. Those two lieutenants I sent back to you saw my weapons—they know what I can do."

Again Commander Sheldon's eyes flicked to the two youths. They nodded woodenly. Sheldon rubbed his big fingers over the side of his jaw, and watched

the teleplate as Hurth Lheuin's voice went on.

"Civilization!" The thin lips of the outlaw curled. "Do you call it civilized to send a man to the mines of Oberon? To force him to dig uranium out of the frozen ground and breathe poisonous air and be fed with food that's not fit for pigs? Is that civilization?"

The fanatic black eyes contracted with hate. Sheldon let the faintest trace of a smile play on his lips for a moment.

"Some men deserve it, Lheuin," he said. "Your methods were discarded two hundred years ago—along with a man named Hitler. Any punishment you received was small indeed compared with your crimes."

"I've had enough of your punishments," broke in Hurth Lheuin, suddenly cool. "No prison can hold Hurth Lheuin, ruler of Mars—and soon to be ruler of Earth as well. You have my ultimatum. Surrender at once. Line your men up on the field—unarmed—and we'll land and take over. With the Mare Wirtum base in our hands, we've taken the main defense of Earth. Then —"

SHELDON'S gaze strayed to the rocket base that was the key to Earth's defense. He was in a building on the far side of Luna, looking over the great satellite fortress. Out there men were standing by their vessels, waiting for orders. Hurth Lheuin wanted those ships intact. A thousand miles out was the fleet of the enemy, waiting to pick off any Earth ship that left the surface.

A motley crew, the pirates, and Sheldon's men would barely use their second wind ridding space of the lot of them. But the new weapon of Hurth Lheuin!

Sheer force! Raw, crushing blasts of matter-destroying energy, without which Lheuin would have been only a third-class fugitive, ex-dictator of a backwoods Martian province. But now the man's ship was surrounded by a shell of invulnerability.

Sheldon's jaw tightened a bit more. There had to be an Achilles' heel in that shell. There had to be!

He watched the activity on the field as a dozen trucks wheeled into a cleared area. Space-suited figures moved efficiently about their work. Crews of huge cannon gave their weapons a final check. Swarms of anti-spacecraft guns speared skyward, their crews unreeling long cartridge belts.

Sheldon let a faint grin linger on his features for a few seconds when he thought of the contents of those shells. Ordnance had thought him mad, but they had agreed to his wild plan. And in the twenty-four hours he had stalled Lheuin, they had performed workshop miracles.

"I've waited long enough," Lheuin's voice broke in. "Are you ready to surrender, or do I have to blow that base of yours into the atoms it's made of?"

Sheldon's answering smile was confident.

"You may as well come down and give yourself up, Lheuin," he said. "Those two officers you showed your secret weapons to have been able to duplicate all the apparatus. We have a ship equipped with your force weapons, and a little better. It's going out there to blow you out of space. So—"

The two lieutenants looked blankly at each other. They were out of the televiewer's range, so Lheuin did not see their puzzled looks and shrugs.

For a moment the outlaw looked surprised, then he threw back his head and laughed.

"You've duplicated my force weapons? That's ridiculous, Sheldon! Don't try to bluff me. I showed them only the effect, not the cause. And they didn't look too intelligent to me!"

"Nonetheless," said Sheldon softly, "they're two of our top scientists. They've made an exact copy of your ship. If you'd like to be blown out of space—"

The outlaw's face darkened as Sheldon drew out the pause.

"If there's anything to be blown out of space," he growled, "it's Mare Wirtum. Enough talk, Sheldon. I'm coming down!"

Sheldon's fingers depressed a switch.

On a smaller teleplate, a figure in a lieutenant-commander's space suit appeared.

"Now," Sheldon murmured. "And be sure the timing is correct. His position is four-sixteen due north of the last reading. Distance eleven hundred miles, but he'll come in fast."

The officer nodded. Sheldon blacked out the smaller teleplate. The larger, with its view of Hurth Lheuin's control room, still was open, and he listened as the outlaw shouted orders in a guttural South Martian dialect at the Martian aborigine whose tentacles slid over the complex control board.

At the Wirtium base, giant cannon boomed silently, hurling huge shells that burst many miles short of the approaching ship. The outlaw vessel plunged moonward. Hurth Lheuin's throaty laugh roared from Commander Sheldon's teleplate.

"I come alone," he boasted. "My fleet will follow later to occupy your base. But first, with my one invincible ship, I wipe out all resistance!"

His laugh faded a moment later when he looked forward to where the shells had burst. Silvery clouds were swelling swiftly in his path. He mouthed a thick oath, and eyed the gleaming dust distastefully.

"A smoke screen! But that won't stop me, Sheldon. It may slow me down some, but the end will be the same."

He moved to the gun turrets in the nose, ran his fingers caressingly over the controls of his force weapons. His eyes were narrowed, sadistic in their eagerness as they tried to pierce the thick fog that billowed between himself and Luna. When they passed into the smoke screen, his arm muscles tightened.

"Blast on," he ordered curtly, eying the bank of meters at his left. "The base is a long way down yet. I'll tell you when to cut acceleration."

He passed out of the blinding cloud of silvery dust into a clearer space, then into another clouded pocket. He swore disgustedly while they cleared that, then his shocked eyes were staring straight ahead.

A space ship was coming directly toward him from the smoke screen ahead! And the other vessel was constructed like his own!

Then maybe Commander Sheldon had not lied about duplicating the force weapons!

But a moment later he was calm again.

"A nice bluff, Sheldon," he conceded. "But it won't work. You've built a copy of my ship, but it hasn't the weapons mine has."

"You'll find out," promised Sheldon's voice, from the teleplate.

Lheuin pointed his ship directly at the other. The distance between the two lessened swiftly. The outlaw lined his sights, slid the split-field range finder carefully back until the focus was exact, and depressed the trigger of his weapon.

THE charge of energy blasted with murderous intensity past the approaching ship, but did not harm it.

Lheuin frowned, for a second wondering. But it was impossible that Sheldon could have duplicated his armor. The range was off—the charge had exploded somewhere in the smoke screen far behind the Earth ship.

He set the range again, swiftly, for the ship was only a few miles away now. His fingers squeezed down the trigger as charge after charge from his terrible weapon blasted out.

Sweat beaded his face. The other ship was still making straight for him, and matching him blast for blast! He hadn't harmed it at all!

But neither had it harmed him. He hunched closer to his weapon. They both were misjudging speed, evidently. He jammed back the range finder.

"Straight ahead!" he roared to the being at the controls. "They can't take much more!"

He hugged the trigger, and watched the other ship grow bigger and bigger. Suddenly he sprang to his feet and stared. His eyes bulged with sudden horror.

"We've been tricked! Swing away! Away!"

It was too late. They crashed through

the space where the other ship had been, and his shocked eyes saw the surface of Luna a scant half mile from them. Before his native at the controls could wrench them aside, the ship of Hurth Lheuin plowed deep into the soft soil of Earth's moon.

There was a swift flash and the invulnerable ship was spread over several square miles of Luna.

Sheldon regarded the suddenly dead teleplate. He gazed from his window toward the point five miles away where the ship had crashed. He spoke into the smaller teleplate.

"Take care of the rest. Get the fleet into space and wipe out or capture the rest of that outfit. Keep me informed."

"Immediately!"

The officer's eyes lighted. He turned and started barking orders.

Sheldon watched him swing into action. He turned to the two lieutenants and permitted himself a grin.

"But, sir, what happened?" one of the youths wanted to know. "Did you really make a duplicate copy of his energy beam? Or—"

Sheldon chuckled and led them to the window. He indicated the film of silver dust that roofed the base.

"A few heavy charges far out into space," he explained, "merely to confuse Lheuin, and prepare for the main show. Then our flak guns spread this layer of silver dust half a mile overhead. The Senate silver bloc will raise the dickens when they find out. But from a distance, it was a mirror, and Lheuin saw his own image. He dived at it, and through the screen when he attacked it."

He chuckled again, as the two lieutenants looked surprised.

"If he'd looked at his instruments," he said, "he would have realized he was near the surface. But he was too busy shooting at his own reflection!"

THE SPACE DWELLERS

(Concluded from page 112)

I will of course reduce you to a state of suspended animation and in that condition you will need very little oxygen."

BARCLAY raised himself over the side of the coffin-like affair and then lay down in it at full length.

"You'll go to sleep in a minute," said Othaloma, "and when you awaken a couple of weeks hence, you'll find yourself a full-fledged Daan and an inhabitant of my capital city, Marbool, which is situated on Goraz; goodbye."

He let the lid drop. The lock clicked and Barclay found himself in absolute darkness. He smelled a faint, pungent odor and then lost consciousness.

One minute later a bizarre craft, ejecting a continuous stream of blue flame from its stern, arose from the island. In a few seconds it floated above the billowing field of clouds that shone with a silvery softness beneath the light of the "comet." Then it vanished among the myriad stars.

Today Barclay's big white laboratory is boarded up and deserted, and a solemn-eyed little Chinaman named Ching Loo is still wondering what, really, became of his master.

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Would they enslave her?

Author THOMAS D. GARDNER gives you his answer in

THE LAST WOMAN

Next Issue's Fascinating HALL OF FAME Selection!

THE ETHER VIBRATES

(Continued from page 13)

test, any type. Please accept these as suggestions for improving STARTLING STORIES.

Some of our members were discussing Ray's story, and we were wondering why it was that Ray has not written a story, one that was a classic lately. Who will ever forget "The Girl of the Golden Atom," or "Into the Stars"? Our organization does not feel that Ray Cummings is a hack, never was a hack, and never will be a hack.

We passed the following resolution at our meeting, and I think that you'll be interested in it.

"Resolved that ———, ———, and STARTLING STORIES be elected honorary members of E.O.B. S.F. for their unselfish promoting of patriotism, war bonds, and war agencies. Signed, Bob Parker, President."

One of the features of your mag especially commended was the use of fine type to put more reading matter into S.S. This is one policy that should be followed by more mags.

I want to compliment you personally on one thing, Sarge, and that is the noticeable reduction in that silly "space-lingo" in your letter column. That has improved your mag as much as anything else that I can think of.

I wish to take exception to a statement or two made in Austin Hamel's letter. He said first that S.S. should become monthly and second that the stories were good "once in a while." I beg to take exception. In the first instance, do not make S.S. monthly. The top five S.F. mags are bi-monthly, and the reason is: they are bi-monthly! If he wants another Thrilling Publication, why not read T.W.S.; it's the same thing almost as S.S., except for a different name. (Don't hit me, Sarge!)

Secondly, if Mr. Hamel will take the trouble, he will notice that each year the number of "classic" yarns grows smaller. (I can prove this by many top S.F. literary critics.) No, the good old days had the best stories S.F. will see.

Enough for this time, Sarge, so I say goodbye. Keep S.S. improving and keep Hitler, Mussolini and Tojo where they belong—in Hades!

—*Box 139, Stanhope, Iowa.*

Nice communique, Kiwi Bob, and the old space dog is especially proud that you noticed our efforts to stand fully behind our country and our President in this crisis of world history. That indicates that you feel the same way, and the old Sarge is proud of you, too.

OLD PLOT

By Tom Regan, Jr.

Dear Sarge: A handsome hero, snake with fish heads, a buzz-saw, a pretty femme with eagle wings —mix them together and what do you get? The June S.S. cover. Bergey again—

Now comes to the non-classical bit by Mr. Cummings. Hero saves race from complete annihilation, legions of flying people, hero gets girl in end. Oh, I've read that so many times, and can you guess?—they were all by the same author. If you don't know the writer, I'll let you in on the secret. Ray Cummings has done them all. Ha, now you know! Could I please give you just one suggestion, Mr. Cummings? How about a new plot every other ten stories, heh?

"The Ideal" was a masterful piece of work, no kidding. The best story in the book.

"Hell-Stuff for Planet X" was really good, too.

As for the other shorts (I mean stories), they were passable.

Finlay and Paul take top honors in the art work and Marchioni takes the booby prize along with Bergey.—*38 Townsend St., New Brunswick, N. J.*

Before I chuck you through the jettison hatch, Kiwi Regan, let's put the next ethergram on the air waves, and then I can knock your two heads together at the same time.

PAST GLORY

By Private Ken Bell

Dear Sarge: I have just finished reading the latest S.S. mag. A very sad disappointment indeed. "Wings of Icarus" by Ray Cummings is the poorest excuse for a science-fiction novel you have ever published. It hardly seems possible that Cummings could be the same man who wrote "The Girl in the Golden Atom," and the illustrations for this feature novel were beyond any excuse. Surely this isn't art!

While on the subject of novels, they seem to be getting shorter and show a very definite decline in quality. What's happened to authors? Can't they write like the yarns of old? True, a good novel pops up now and then like "Speak of the Devil," but they're so few and far between.

Not so very long ago a guy could pick up a S.S. mag. and read such classics as "The Black Flame," "Twice in Time," "A Million Years to Conquer," "The Three Planeteers," "The Fortress to Utopia," to name a few. And just in case you doubt that there are many more, read "Gateway to Paradise," "Five Steps to Tomorrow," "The Impossible World," "The Bridge to Earth," "Sojourn on Titan," "A Yank at Valhalla." You must get the idea by now, or are you too busy with that jug of xeno?

The cover for this June issue is a nice bit of work, thanks to Bergey; and Finlay's illustration for "Hell Stuff for Planet X" was very good. Let's see more of his work. Why not put a list of the guys who turn out these illustrations on the contents page? What are you afraid of?

"The Hall of Fame" story was very good. I have yet to read a poor story by Weinbaum. Let's have more and more of his work. Why not make "The Hall of Fame Classics" longer and leave out the short stories? They aren't worth the space they take up. And here's something to think about. Why not put out an annual with the very best of the "Hall of Fame" Classics? For years now I have collected science-fiction mags as sort of a hobby. I have them all bound together in book form. But I still would like the idea about the annual.

I'm looking forward to the publication of "The Great Ego" with Virgil Finlay illustrations.

That's enough for now.—*Hq. & Hq. 330th Serv. Group, Pendleton Field, Pendleton, Oregon.*

Well, anyway, we used to publish good stories, eh? Even as recent as two issues back. You just don't like Ray Cummings, Pee-lot Bell. At least, that's the conclusion the old Sarge draws from your letter. So, before I tell you to jettison yourself along with Kiwi Regan in the aching void, I'd better wait until you two pee-lots have reported on the novel in this present issue. I'll bet you find PIRATES OF THE TIME TRAIL very much to your liking. Let me hear from you two junior astrogators on this before I pass judgment on your case.

As for your other suggestions and questions, they more or less answer themselves or merely leave an opening for small talk. About the annual to end all annuals, we'll take a vote on the stories to include in such a book after the war.

Let us turn now to a graveyard soliloquy.

BETTER THAN USUAL

By Clarence Jacobs

Greetings, Ghoul: Hocking my watch at the local pawn shop I walked into the dubious intent of buying an issue of STARTLING STORIES. The druggist sighed, tapped his head to question my mentality, and gave me dire warning. I gave a moronic little giggle and bought the darn thing, anyway.

When I saw the cover in its true light, my face turned a sickly green. Checking on the contents page the name Bergey flashed to these startled eyes. That guy is in a rut! If it isn't the famous BEM it's a fiend and vice versa. Get Paul to draw one of his famous machine covers—without people. So much for the cover. (No attempt to classify the cover, Sarge.)

With idiotic droolings I turned to the novel, fondly hoping to find an eighty-pager or a sixty-thousand-worder. Tisk, tisk, Sarge, longer novels, please. The "scientifiction novel" seemed to be more on the fantasy side; nevertheless, it was the best novel you've had in the last few issues. Incidentally, Sarge, when did the cover appear in the story? It's tough that Mr. Hirohito didn't get one of those "deputies."

The Hall of Fame short seems a little better than last ish. Maybe 'cause science and crime seem to

go together. Sarge, most if not all of the Classics seem to be coming from ye olde and ancient SCIENCE WONDER STORIES. How about some variety? Some Skylarks, for instance.

The ever-lovin', save-the-world theme this time turns to "The Great Invasion." Morrison should be able to write better things than that. Ugh! "Glory Flight" was little better, but better.

Departments—well, never did like Thrills in Science, but leave it in there. "This Startling War" was a very pleasant surprise. Keep it! "Meet the Author" provides a pleasant way of getting acquainted with the authors of STF, and "Review of Fan Publications" has the same happy medium with the Fanzines.

"The Ether Vibrates" is the best readers' department, bar none. Keep up the good chatter, Sarge.

Personal to Harry Sinn: Quite right about science in scientifiction. Quite wrong about trimmed edges. Untrimmed edges have a tendency to curl up and tear.

The mag, barring the shorts, is better than the last few issues, but can never touch Vol. 1, No. 1.—*P. O. Box 22, Upland, Calif.*

The biggest item about your ethergram, Kiwi Jacobs, is that you don't agree with Peelot Bell that our aroma is stronger than usual. You think the last issue was better. But let not the old space dog have trouble with you over the cover. The painting fits the scene of the fight Alan Frane had with the Yug in Chapter V. Now go soak your head and put on your double-lensed glasses and re-read that portion.

HURRAH FOR RAY!

By Ray H. Ramsay

Oh, Sargey-bargey! Don't like it, do you? Well, the next time you and some snappy dish of a passenger plan a crush party, better do it out of earshot of the crew's quarters.

Thanx, tho, for printing my letter in the November ish. You don't seem to have done yourself any good by publishing it, becuz it's just acted as encouragement to write again.

You didn't do such a bad job on the June S.S. Foist place goes to Cummings the Great for "Wings of Icarus." Ray's on the up-grade.

"Hell-Stuff for Planet X" cops second honors. Now I know what might have resulted if O. Henry had taken up Stf.

[*Turn page*]

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"The Ideal" rates third.

Then there's "Ghost Planet." Good yarn, but since I've heard that plot before. Wasn't it Ambrose Bierce who thought up that invisible color idea? Well, anyway, Lee's handling of it wasn't bad.

"Son of His Father" feets the list. Not that it was really bad, though; just that the others were swell. "Son of His Father" didn't appeal to me especially, but I realize that this doesn't make it any less of a good story.

Seems like Gene Hunter, who can't think of a thing but "trim the edges" has made a convert of Tommy Regan. Well, I'll invite 'em both out behind the aft tool-room.

I take back what I said in my last letter about your features. Since then, I've come to like "Meet the Author." But I still say that all your features and specials except it and "The Ether Vibrates" aren't worth keeping.

In closing (shut up, whoever cheered) I wish to make it clear that my name is RAY, not ROY, as you spelled it, and that the name of my home town (dump, I should say) is NECHE.—*Walhalla, N. Dak.*

There's nothing like keeping after things, Pee-lot Ramsay. Maybe in time you'll learn to love the old Sarge, too. He has an assortment of features, also. I thought Author Cummings did a pretty good job on WINGS OF ICARUS, myself. What I can't understand is how I overlooked Ahla (the gal) on my last trip to Neptune. Oh, well. . . .

SPEAKING OF GALS

By Laura Lee

Dear Sarge: A few hours ago, while airily winding my innocent self in and out among the sea of soda pop bottles and sticky Easter eggs that temptingly grace the center of the purple and yellow linoleum at our corner drugstore, and noting how cunningly contrived a target it would be for those clumsy ones who might rush unheedingly into the beckoning folds at the doorway, perchance to escape a bit of our famous liquid sunshine, what was I to do, but to behold a section of rainbow, plastered reverently upon our hallowed newsstand.

Intrigued, and with the original intention of buying a magazine, I forced myself to lift my eyes from the drooling Don Juan I had been admiring, and hastened my attention to the aforesaid subject. Upon a closer observation, I discovered, much to my delight, that the new issue of STARTLING STORIES had just come in.

Suddenly, upon minute examination, I found myself blushing with shame as I became conscious of the semi-nude condition of the young lady who I was later to know as Ahla. Hugging the book to my crimson self, I made my stumbling way to the cashier's counter where I paid the nice man fifteen of my hard-earned pennies, my confusion being such as I committed an unforgivable error, I forgot to read the blurbs.

Upon arriving home, soaked to the skin by sunbeams but still clutching the sinful thing to my person, I discovered the novel was by Ray Cummings.

Now, I've always been a peaceful soul, quiet, and self-controlled, and if my ancestry happens to go back to blood-thirsty, scalp-collecting redskins, it's no fault of mine. But I will say that I lay there dying of laryngitis, that if the above mentioned person had at that moment been in the room with me, I would have lost my outer coat of civilization(?) and reached for the nearest Tomahawk.

To go on, my eyes were pinpoints of cold steel, my mouth was a grim, hard, white line; emotion was running riot within me, and so, with leaden fingers, I opened the magazine.

"Wings of Icarus." I let that sizzle awhile, then I looked at the pictures and read the heading. It took several hours to penetrate, but I finally made myself realize that it was actually true! Cummings had finally written a story that was not about a time machine and there was not even a shadow man running around loose. I felt faint, and called for water.

With bated breath, I commenced the story. One hour passed. Two hours passed. And at last I raised my glazed and blood-shot eyes.

Upon my tender brow was carved all of the unbelief of this rugged world. I had found it. A lifetime of search. A Cummings' story that was readable. In fact, *more* than readable. For Cummings, it was magnificent!

Never another "Girl of the Golden Atom." I don't believe it will join the immortals by a long shot, but on the whole, I think it was worth laryngitis (I have a very good idea that this word is mis-spelled, but I'm too lazy to look it up).

As to the other stories:

1. "Wings of Icarus"—amazing!

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2. "Hell Stuff for Planet X"—very good; the best of the shorts.
3. "Ghost Planet"—not so bad, but it would have made a better short novel.
4. "The Ideal!"—who on *earth* called for a reprint on that tripe? A lost race of the Martian missing link. It was the worst Hall of Fame story.

Now for the best stories of the last few months.

1. "Speak of the Devil."
2. "Devil's Planet."
3. "Blood on the Sun."
4. "Two Worlds to Save."
5. "World Beyond the Sky."

And now, you frothing old sea walrus, I bet ten Xeno jugs to one this missile of destruction will never see print due to its masterful ego-puncturing qualities. If you'll move that Zombie over, you poisoned-mouthed old fishhook, I'll join you in a swig of Xeno.

Oh, by the way, my sweet blood-sucking vampire, do you know of any S.F. clubs in or around San Francisco or Los Angeles? If not, would any fan who happens to read this glorious masterpiece, please get in touch with me and tell me where the nearest one is? There must be some fans around here, for those mags disappear on the newsstands fast enough, and I don't buy 'em *all!*

Have you noted, you seaweed smoker, that I lost my high and mightier manner?

Well, I'll close now (I can hear your sigh of relief).—*3500—72nd Ave., Oakland, Calif.*

Honey chile, the old space dog read clear to the bottom of your letter before he realized who was calling him all those lovely names. I thought I was going to have to pin the ears back on some saucy young astrogator—until I saw I was conversing with a lady. I might have known.

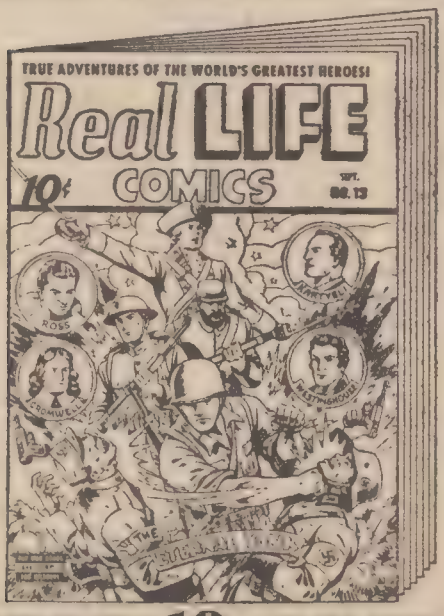
As for your S.O.S. for fan clubs, there's a flock of them out there on the West Coast, and if you don't get any response from this letter, suppose you drop a line of inquiry to Shangri-L'Affaires, whose address you will find in the Review of Fan Magazines in this issue.

SHORT BUT SWEET

By Raynard L. Natucci

Dear Sarge: This is my first letter to S.S. So here is my rating: [*Turn page*]

Approved by Parents and Teachers



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1. "Wings of Icarus"—6 xeno jugs.
2. "Hell-Stuff for Planet X"—5 6/10 xeno jugs.
3. "Son of His Father."
4. "Ghost Planet."

All of the stories were top-notchers except "The Ideal." It was plumb terrible. Why don't you have stories of "Atlantis" or of "Mu" or "Sunken Lemuria"? (Omit the misspelled words; I am only 19 years old.) I've been reading S.F.S. for two years and still haven't found any mag. to top this one. The rest of them are merely just as good or not as good. The cover was perfect. E. K. Bergey is all right. (How is the purple ink?)

"Wings of Icarus" is one of the best stories Ray Cummings ever wrote. Keep him on. Keep all depts. going. Well, Sargey, you better lay off of the Xeno for awhile. The way you answer those ethergrams, it sounds like you're nuts, but you will be the same old Sargey to me, Pops old boy.—*1210 East 30th St., Tacoma, Wash.*

Well, Kiwi Natucci, you seemed to run out of Xeno jugs on your third prize money. Don't fret; the old space dog will supply you. And I liked your alibi for poor spelling. The old Sarge is only fifty-nine himself and expects to graduate from the eighth grade space prep school come next Michaelmas. You and I, we're just frisky kids, huh?

TWO YEARS OF SILENCE

By Ned Reece

Dear Sarge: I've been reading your mag for two years now and have never written a letter before because I haven't read but one story I consider really outstanding, which was Hamilton's "Yank at Valhalla."

But in the last ish Cummings' "Wings of Icarus" was so different from the usual plots of your writers, plus good writing, I felt moved to tell you it was the best novel you have published since I became a fan of your mag. More, more, more! Give us more interplanetary novels like this one.

"Speak of the Devil" had no place in your magazine, although it was a well written story. Please give us more like the Cummings' story and less like Daniels' novel.

Well, Sarge, I must admit Bergey didn't block up the cover as he usually does, so let's hope he has turned over a new leaf and hereafter takes his time instead of trying to smear up the cover (must be Cummings' story that inspired him) as he usually, pardon me, always does.

As for your inside illustrations, Finlay, of course, takes first place with his illustration of Gallun's yarn. The rest of the pics, with the exception of the guy who forgot to sign his name for "Ghost Planet" were poor, as they usually are.

Oh, well, maybe S.S. is improving because there were two good pics this time. I don't suppose it will do any good but, Sarge, please, I beg you let Finlay or Paul or anybody besides Marchoni or Morey illustrate your feature novels. I know what I've said does no more to your conscience than it would to the Sphinx but if it would do anything to your heart of stone about getting rid of some of your artists' (artists?) I would get down on my knees to your Space Rover.

Come to think of it I bet the only space you ever navigated was the distance between the easy chair and the door when your wife is after you, if you have one.

Well, Sarge, I'll have to shut off the rockets for this time and give you some rest. I'll be back at a later date to plague you some more.—*Box 557, Rt. 2, Kannapolis, N. C.*

Boy, some of your sentence structure is a Rube Goldberg masterpiece. I see I won't be letting you dissemble any important equipment here in the astrogation chamber for a couple more voyages at least. Glad you liked the Cummings yarn. And watch out for Finlay drawings; you'll see quite a few of them as time goes on.

As for plaguing the old Sarge—think nothing of it. I've been plagued by experts.

TOO MUCH SLUG

By Kent Bone

Dear Sarge: I have just finished the June, 1943, issue of STARTLING STORIES. I rate the stories as follows:

1. Wings of Icarus; Ray Cummings. Don't you think that monstrous slug was a bit too much? It gets 4 jugs of Xeno.
2. Hell-stuff for Planet X; Raymond Z. Gallun. One of the best shorts I have read. Three and a half jugs of Xeno.
3. Ghost Planet; Thorne Lee. Not as good as I like them, but better than the others. Two and a half jugs of Xeno.
4. Son of His Father; Frank Belknap Long. Long can do much better. Two jugs of Xeno.
5. The Ideal; Stanley G. Weinbaum. Not so good. ½ jug Xeno.

The Ether Vibrates was good. As to Gene Hunter and Clinton Blackburn, I think the mags are just as good without trimmed edges.

The Rocket's Red Glare was *good*. I hope you keep it up.

Thrills in Science was pretty good, too. I didn't like the cover so well. I hope you get some more better ones.—*2577 Ferris Ave., Detroit, Mich.*

Suppose you take a nice long slug of Xeno, Pee-lot Bone, and forget all about it. Cummings put the slug in the story, and Bergey put the slug on the cover. Now don't complete the vicious circle and make the old senior astrogator slug you.

BETTER LATE THAN NEVER

By LaVerne Jandreau

Dear Sarge (if I must call you that): Though I usually don't go for this kinda stuff, being a silent reader albeit an admiring one, I simply had to write in to let you know how much I enjoyed Norman A. Daniels' "Speak of the Devil." It was one of the most interesting and humorous stories imaginable.

For Xeno's sake—DON'T LET DANIELS GET AWAY!!!

Though I buy every issue of STARTLING STORIES that hits the stands I do not always enjoy the novels. For instance, the current "Wings of Icarus." If that's a sample of Cummings' work—*Phew!*

Please, PLEASE, PLEASE get some better Hall of Fame stories. Although some of the stories are passable, the rest of them are as bad as your space talk.

I also want to mention a story that I believe should go down in stf. history. Kuttner's "A Million Years to Conquer." I know I'm a little late with my praise, but better late than never.—*117 East 53rd St., Long Beach, Calif.*

Dear Kiwi Jandreau (if I may call you that), for a strong, silent he-man reader, you do pretty well with your first rocket blast. Of course, you will note immediately that your opinions jibe with those of some of the junior astrogators and disagree violently with those of others of the little crackpots. So you can figure out the percentages and answers for yourself. Nevertheless, before I pause to reach for the aspirin and the Xeno jug, let me say that you are heartily welcome here behind the eight-ball with all our screw-balls. And that gusty welcome goes for all the rest of you first offenders who are with us on this voyage.

Here's another quickie from a kiwi who means business.

SAY IT WITH SUBSCRIPTIONS

By Ronad Maddox

Dear Sarge: I have just finished the June issue and it was tops. The best of the six S.S. I've read yet. The lead story, "Wings of Icarus," was the second successful story by Cummings that I have read and that's quite a few. Here's my ratings:

1. Wings of Icarus; Cummings. What else?
2. Ghost Planet; Thorne Lee. Nice ending.
3. Hell-Stuff for Planet X; Gallun. No comment. But it was a swell story.
4. Son of His Father; Long. O.K.
5. The Ideal; Weinbaum. This belonged in third place; sorry.

Everything else was O.K. except for this Hunter guy. Every time I read a letter column in an S.F. mag. I find him sticking his wart ears in. After all,

what does he want for a few cents? The only reason he buys a magazine anyhow is to complain about it not having trimmed edges. Mr. Hunter, you ought to be ashamed of yourself.—*87 Utica St., Hamilton, New York.*

Okay, Kiwi Maddox. I notice a number of you pee-lots are having a merry time over trimmed edges, but I haven't offered any side-line comments because I tossed the ball out to you space players a couple of innings ago. Have a good time, but quit by dark. And don't throw any pop bottles (Xeno jugs, to you space warps) at the umpire.

Sorry I just can't cram all the communiques into this issue, but I'll just have to hold a batch of them over until next voyage. Don't fret, my little pets, I'll use them to keep me warm on the cool evenings.

Before we blast off for this time, here's a final kick in the rocket (pants) from a fanzine artist. I think.

THANX, SARGE

By Joe Gibson

Saturn, Ole Bean: Ease down the Xeno jug, as this is not one of your li'l Kiwis come to make the usual tribute to their god. This is definitely invasion, as these two hefty blasters plotting a trajectory on your jive section can easily testify. First, let me introduce myself. I, Sir, am a pirate. I do not read SS. I have not read TWS since Via went with Pyramid. I dunnot like your Hall of Fame specials as you seem to find a mysterious glee in picking one which has one of those Paul illustrations which fit but remotely. *But* remotely.

I am disgusted with your interior artwork. Why? Simply because it pains me to see such Venusian muck splattering thy fair yarns while you have such niftily sweet stuff stuck in *as fillers!* Pipe the

[*Turn page*]

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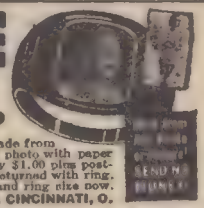

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picture stuck in on P. 65. More bits by the same gent adorn, and have adorned, your depts. for lo! these many. How's come your story illustrations don't measure up to these? Ummm. Probably because I don't read SS. Hah.

I have been the height of admiration and the target of many a killer's lust in better climes than this, my hook-nosed vacuum-bottle skipper.

Heheheh

Ross Rocklynne Brings Us Up to Date on the Facts of His Life

THOSE of you who are steady readers of STARTLING STORIES have met the author of this issue's full-length novel before. To others he makes his bow. And to all of us, Ross Rocklynne presents a bit of brand-new autobiographical data as well as a few pertinent remarks on his current novel.

There isn't a great deal your editor can add,

ROSS ROCKLYNNE

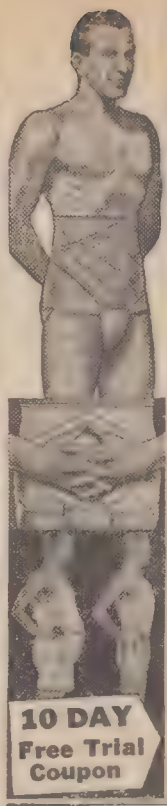
beyond saying that Ross Rocklynne is a steady producer of fantasy fiction of the younger group of writers, that he has been at the job for some years, and that he appears frequently in our group of scientifiction books. Be sure to watch out for his short novel, THE GIANT RUNT, which will appear soon in THRILLING WONDER STORIES.

Meanwhile, here is what Mr. Rocklynne has to say about PIRATES OF THE TIME TRAIL.

PIRATES OF THE TIME TRAIL is propaganda. I say it shamelessly. I want to make quite sure that you realize the true policy of the Japs and Germans: organized banditry. I want to make quite sure that you realize that the ethics of the Japs and Germans are somewhat worse than those of Simon of Chadres. As such, it would be very nice if we could truly close them off from our other nations and races who abhor military might, as Simon of Chadres was closed off.

The idea behind PIRATES OF THE TIME TRAIL is not new. As I am science-fictionally inclined myself, I recall the exact stories which ushered in a new brand of time-travel. They were, in order, I believe, THE BRANCHES OF TIME, by David R. Daniels (a story and an author I recommend for THE HALL OF FAME); THE WORLDS OF IF, by Stanley G. Weinbaum, whose science-fiction readers will never forget, and whose stories can hardly be equaled, and SIDEWISE IN TIME, by Murray Leinster.

[*Turn page*]



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The first two stories appeared, I am quite sure, in the same issue of a 1934 or 1935 WONDER STORIES; the third at about the same time in ASTOUNDING STORIES. That the fundamental idea was born separately in the minds of each of these three writers at the same time, I do not doubt.

I must claim some sort of priority on the idea, though. More than ten years ago, I ambitiously started a novel of the Ray Cummings type (shamelessly plagiaristic as to style) which I tentatively titled THE BALL OF TIME. The three writers named above scooped me, for I never finished the novel. I have the manuscript to prove it, though.

Strangely enough, however, even after this lapse of years, PIRATES OF THE TIME TRAIL embodies some events and some scientific principles which I included in my lamentably unfinished work.

My biography-in-brief has already appeared in this column. For the information of new readers, however, and also to bring the older ones up to date:

I am six feet two, blond, and very, very happily married. Science-fiction has been of interest to me for much of my life, and though I will never again experience the grand thrill that the first popularly published scientific fiction stories brought me, I still write and read it with a great deal of interest. The pressure of life, though, slowly, slowly forces me from old likes and old habits. I regret this. But there are new horizons.

Since my biography last year, we have traveled from California to Cincinnati, and are now back in California again.

—*Ross Rocklynne.*

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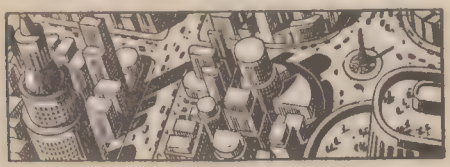
REVIEW OF THE SCIENCE FICTION FAN PUBLICATIONS

By

SERGEANT SATURN

WELL, me hearties, the old Sarge will write this department before doing THE ETHER VIBRATES this month. Why? So I won't be perturbed by any possible repercussions on the way I handled this section last issue. I took one glance at a letter, however, and the writer admitted it was funny stuff. But he ought to consult



a good dictionary. The way he spelled "funny"! P-H-O-N-Y.

But to get along. Small cargo this month, fellows—but we all know there are lots of reasons. Most of them begin with the word—War. So, then, let's be off on this temporarily short word-war.

THE ACOLYTE, 720 Tenth Street, Clarkston, Washington. Editor, Francis T. Laney. Quarterly. 35c for four issues.

Twenty-nine pages of standard size white paper with single-spaced black type. Neat headings, and no illustrations. Dedicated to the late H. P. Lovecraft. Several interesting articles as well as poems and stories. The cover is an effective black with lettering and drawing in white lines by Rimel. A very neat fanzine. Nice going, Editor Laney.

DAWN, 3618 Maple Avenue, Oakland, California. Editor, Tom Wright. 15c per copy. No indication of publication regularity. This issue reviewed being Spring, 1943.

You fans want to sink your eye-teeth into this job. Twenty-eight pages of standard white thick paper with headings and illustrations done in single color of blue or green or black-and-white. Excellent selection of articles, poetry, features and some fiction. The artwork is clever, no less than three special illustrations being reminiscent of Virgil Finlay. But the pay-off to the old Sarge is the back cover. One of the Smith brothers is contemplating with amazement a new streamlined cough drop, while overhead Aunt Sophie or somebody has just made a soap-suds test.

No foolin', kiwis, this is a nice number. Congrats to Wright and Ebey. P.S. I didn't mention the front cover. Get the mag and see that darb for yourselves. A very effective black and white a la Finlay.

FANTASY FICTION FIELD, 6401 24th Ave., Brooklyn, N. Y. Editor, Julius Unger. Weekly. Price 5c per copy.

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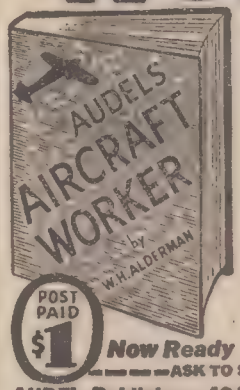

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not yet on the stands is still a feature. Occasionally an unidentified photograph comes through, but you fanziners probably dig it. Okay, Editor Unger.

FANTASY-NEWS, Box 7316, Halethorpe, Md. Editor, William S. Sykora. Weekly. 3 issues for 10c; 8 issues for 25c.

This job is similar to FANTASY FICTION FIELD in format. Otherwise, it stands on its own feet, just now featuring news about fans in the Armed Service. Nice going, Editor Sykora. You ought to expand your publication in no time. We remember you when you lived in Queens Borough, Long Island. Good luck.

SHANGRI-L'AFFAIRES, 1055 Wilshire Blvd., Los Angeles, California. Editor, Phil Bronson. Apparently a monthly bulletin. No price.

This six-page job of standard white paper with black type is okay. Mostly news items, but it includes one half-page cartoon on back cover. (Confidentially, the old Sarge never did understand this SHANGRI-LA set-up. Maybe if Jimmy Doolittle would fly over and drop James Hilton on my head I could write Herr Himmler for President Roosevelt's explanation.) But don't let my confusion deter you Shangri-lites. Isn't it about time for an issue of the fourteen-inch format with all the phonetic spelling?

THE VULCAN, Route 1, Ripley, Tenn. Editor, Lionel Inman. Published occasionally. Single copies, 5c.

Well, blast my rockets, but here is practically a one-man fanzine if the old Sarge ever saw one. Editor, publisher, printer, artist, editorial writer, etc., is Kiwi Inman. Eight sheets—sixteen pages—of drawings, news, articles and such. And, my, oh, my, two whole pages devoted to listing the contents pages of STARTLING STORIES from January, 1939, to March, 1943. This fanzine is for the younger readers—and it may grow into a nice slick fanzine. Good luck to you, Editor Inman, on this brand-new venture.

All of which concludes the round-up this issue on fan publications. So, you space monkeys swing back along the girders to the astrogation chamber and cluster around the old Sarge's desk, and we'll spill open the mail sack and let things vibrate.

—SERGEANT SATURN.

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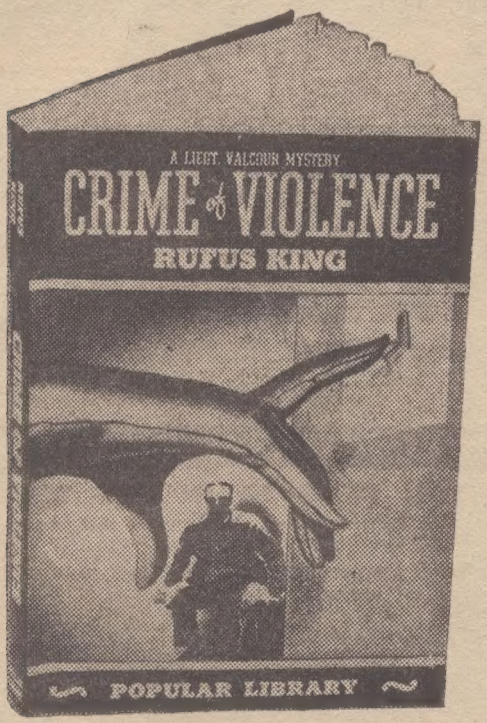

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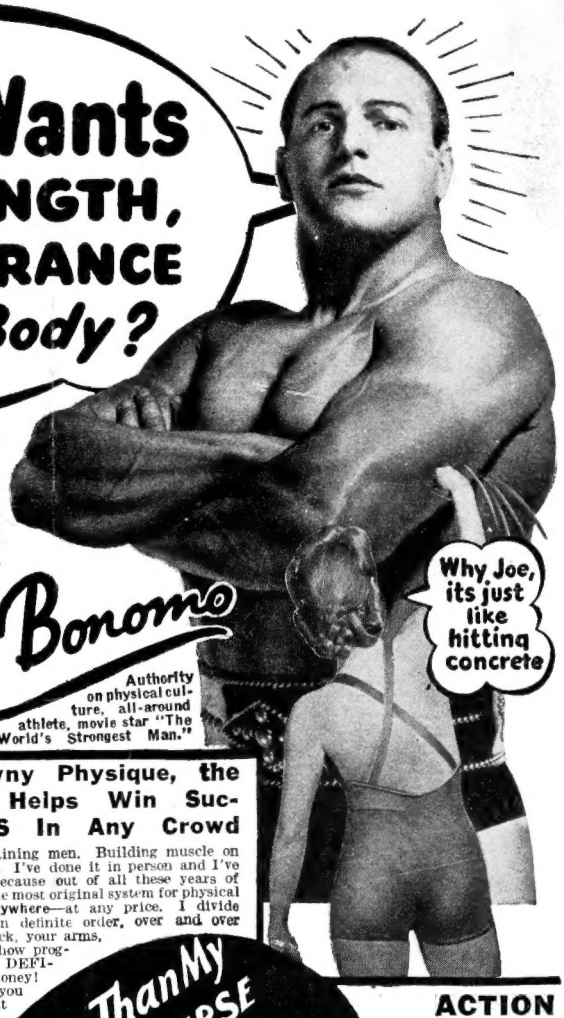

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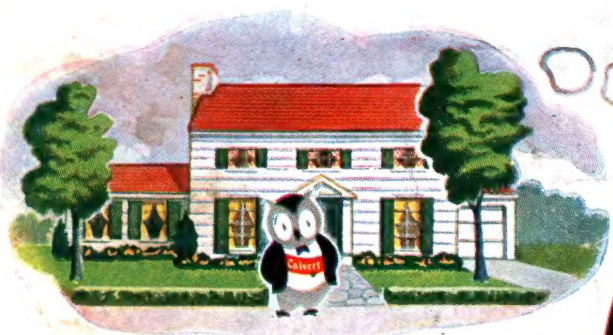

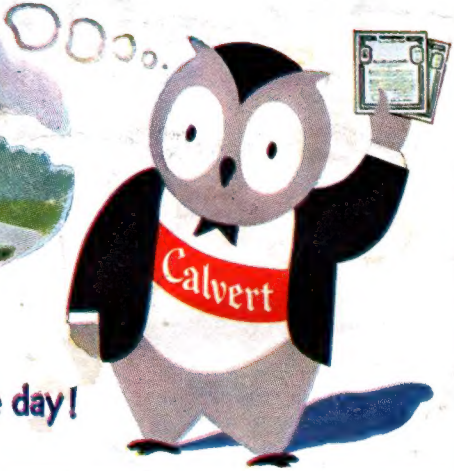

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